

## LICENSE AGREEMENT

The School Board of Palm Beach County, Florida, hereinafter called the "Board," hereby grants to the Village of Wellington, a municipal corporation, hereinafter called the "Licensee," a license ("License") upon the following terms and conditions:

1. Grant of License. The Board hereby grants to the Licensee a License to enter upon the lands hereinafter described (hereinafter "Board's Land") at any time for one (1) year from date of this License, in order for Licensee, at its sole cost and expense, to install, maintain and operate wireless communication equipment on the existing Instructional Television monopole ("ITV Pole") located on the campus of Palm Beach Central High School (the "Project"). This License shall automatically renew from year to year, provided that neither party provides to the other party a notice of intent to terminate this License, as provided herein. Licensee is authorized to use the ITV Pole to install, operate and maintain the communication equipment, more particularly described in Exhibit "A", attached hereto and made a part hereof (the "Communications Equipment"). Prior to the installation of the Communications Equipment, Licensee shall, at its sole cost and expense, remove the Board's existing antenna and other equipment from the ITV Pole and return it to Board. In the event Licensee, after the initial installation of the Communications Equipment, proposes to construct or install any alteration, improvement, or material modification to the Communications Equipment or the ITV Pole, Licensee shall submit to Board's Deputy Chief – Facilities Management (or equivalent position in the event of a future change in the job title) (the "DC-FM") plans and specifications for the new Communications Equipment or ITV Pole (the "Alterations") together with, if requested, a structural analysis prepared by a licensed engineer provided by Licensee and certified to Board concluding that, in their professional opinion, the ITV Pole structure and foundation can accommodate the Alterations, or detailing the modifications necessary to the ITV Pole or foundation to accommodate the Alterations, which plans, if approved, shall supplement or replace the existing plans. All Alterations constructed by Licensee to the ITV Pole and foundation shall be deemed a part of the ITV Pole. Alterations to the Communications Equipment, including new solar panels, antennas and/or equipment shall be deemed part of the Communications Equipment and not the ITV Pole, and, within ninety (90) days after expiration or earlier termination of this License, shall be removed by Licensee and Licensee shall repair any damage to the ITV Pole caused by the removal of the Communications Equipment, using materials of like kind and quality. The DC-FM is hereby delegated authority to approve future Alterations, without further consideration or approval by the Board.

2. License to Use. Notwithstanding any provision of this License to the contrary, the use of the Board's Land by the Licensee shall only amount to a license to use the Board's Land on a non-exclusive basis. The parties agree that nothing in this License shall be construed as granting the Licensee any title, interest or estate in the Board's Land.

3. Ownership of Property. All Communications Equipment, tools, equipment, and other property taken upon or placed upon the Board's Land by the Licensee shall remain the property of the Licensee and shall be removed by the Licensee within sixty (60) days of the expiration of this License, or any renewal thereof. If the Licensee's Communications Equipment, tools, equipment and other property is not removed in this timeframe, the Board, at its sole option may remove the Licensee's Communications Equipment, tools, equipment and other property and the Licensee shall reimburse Board for the expense of removing said Communications Equipment, tools, equipment and other property. Notwithstanding the foregoing, the Licensee, at its sole cost and expense, shall restore the Board's Land to its previous condition, using materials of like kind and quality.

4. Notification and Coordination of Entry. All Licensee's employees, contractors and others who enter Board's Land pursuant to this License (hereinafter "Users") shall notify the school administration by reporting to the school office prior to any Users entering the Board's Lands. The Licensee shall coordinate with the school administrator when the Licensee will enter the Board's Land to avoid the disruption of school activities, operations, or testing.

5. Requirements for Safety. The Licensee shall separate students and staff from construction on Board's Land by secure barriers. Prior to issuance of the notice to proceed, a safety plan shall be provided by the Licensee which clearly delineates areas for construction, safety barriers, exits, construction traffic during the various phases of the Project and when conditions change. Where heavy machinery, as is used for drilling, earth moving or scraping, is required to work on Board's Land, the Licensee shall separate work from occupants by secure double barriers with a distance of 10 feet (3048 mm) in between. When hazardous chemicals as defined by 29 CFR 1910.1200, OSHA Hazard Communication Standard are to be used on the Board's Land, the Licensee shall notify the Board's Chief Operating Officer ("COO") in writing at least ten working days before any hazardous chemical is proposed to be used and obtain the COO's written approval prior to using any such hazardous chemical. The notice shall indicate the name of each of the hazardous chemicals to be used, where and when they will be used, and a copy of a Material Safety Data Sheet (MSDS) for each hazardous chemical. The Licensee shall comply with the safety precautions and handling instructions set forth in the MSDS. Copies of hazardous waste manifests documenting disposal shall be provided to the COO who will notify occupants of the anticipated presence of toxic substances during the installation, maintenance, repair of an improvement, or addition to an existing improvement. The construction of the Project by the Users shall be coordinated with the COO providing a minimum of ten (10) days prior written notice. The Licensee shall ensure that the Board's Land on which the Project will be constructed is safe and secured at all times that work is being performed and that such work is conducted in such a way as to avoid the risk of personal injury to the students, visitors, faculty and staff of the Board. The Licensee shall make its best efforts to schedule the construction of the Project during a time or times when school is out of session so as to avoid a disruption of activities at the school. To the extent that any work is undertaken while school is in session, the Licensee shall ensure that, during and as a result of construction of the Project, the Board's existing driveways, traffic stacking areas, bus loops and parking lots, shall remain open and passable at all times by the Board's pedestrians and vehicles, including school buses.

6. Alcohol, Nicotine and Tobacco Prohibited. The manufacture, distribution, dispensation, possession, consumption or use of alcohol, tobacco products of any kind, products containing nicotine, including e-cigarettes or controlled substances on Board's Land is strictly prohibited and violation of this provision shall be cause for immediate termination of this License.

7. Background Screening. The Licensee shall prohibit its employees and contractors from having contact with any students that may be present on the contiguous School Board-owned schools. In the event that the applicable Florida Statutes regarding background checks of non-instructional contractors are subsequently interpreted or amended to require background checks of the Licensee's employees and/or contractors, the Licensee warrants and represents that it will promptly and fully comply with such statutes, at its sole cost and expense. Neither the School Board, nor its members, officers, employees, nor agents, shall be liable under any legal theory for any claim whatsoever for the rejection of any Licensee employee or contractor (or discontinuation of the Licensee employee's, or contractor's services) on the basis of these compliance obligations. This shall be deemed to be a continuing warranty and representation for the term of this License and failure of the Licensee to strictly comply shall be grounds for immediate termination of this License.

8. Requirement for Insurance. The Licensee assumes all risks associated with the Licensee's personal property, equipment and fixtures located on the Board's Land. In the event

of loss, damage or injury to the Licensee's personal property, equipment or fixtures, the Licensee shall look solely to any and all insurance in its favor without making any claim against the Board.

Without waiving the right to sovereign immunity, the Licensee acknowledges that it is insured for commercial general liability and automobile liability in the amounts required by law, as may be amended from time to time. In the event the Licensee maintains third-party commercial general liability or business automobile liability insurance, the Licensee shall maintain limits of the greater of the following: (i) One Million Dollars (\$1,000,000); or (ii) the statutory cap specified in Florida Statutes Section 768.28; combined single limit for bodily injury or property damage and shall add the Board as an additional insured to the commercial general liability policy, but only with respect to negligence arising out of this License that is not a result of the Board's negligence. The additional insured endorsement for the Board shall read "The School Board of Palm Beach County, Florida, its Officers, Employees and Agents". The Licensee agrees additional insured endorsements shall provide coverage on a primary basis. Claims-bill tailored coverage shall not be considered third-party liability coverage for purposes of this License.

The Licensee agrees to maintain or to be self-insured for workers' compensation and employers' liability insurance in accordance with Chapter 440, Florida Statutes, as may be amended from time to time and provide the School Board a Waiver of Subrogation Endorsement, WC 0003 13 or its equivalent.

The Licensee agrees to provide the School Board with an affidavit or certificate of insurance evidencing insurance, self-insurance and/or sovereign immunity status, which the parties agree to recognize as acceptable for the above-referenced coverages. Compliance with the requirements of this paragraph shall not relieve the parties of their liability and obligations under this License.

The Licensee waives all rights against the Board and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by any insurance maintained. The Licensee hereby waives any right of subrogation against the Board for loss, damage or injury within the scope of the Licensee's insurance, and on behalf of itself and its insurer, waives all such claims against the Board.

9. All of the Licensee's contractors and other non-governmental employees who enter Board's Land pursuant to this License (hereinafter "Contractor") shall comply with the following insurance requirements. Each Contractor shall provide the Certificate(s) of Insurance for required coverage prior to entering Board's Land. In no event shall the limits of said insurance policies be considered as limiting the liability of Contractor under this License.

Workers' Compensation - insurance coverage in accordance to and in compliance with Chapter 440, Florida Statutes.

Employers' Liability – insurance coverage with limits as follows:

- a) \$ 500,000 Bodily Injury by Accident for each accident
- b) \$ 500,000 Bodily Injury by Disease, policy limit
- c) \$ 500,000 Bodily Injury by Disease, each employee

Contractor waives all rights against the Board and its agents, officers, directors and employees for recovery of claims for bodily injury to the extent these injuries are covered by the workers' compensation and Employers' Liability Insurance.

Business Automobile liability shall be required with limits of at least; One Million Dollars (\$1,000,000.00) per occurrence for both bodily injury and property damage Combined Single Limit for owned, hired and non-owned automobiles, with the School Board of Palm Beach County,

Florida as the additional insured on the policy. Business auto coverage shall be written on the most recent form of ISO form CA 00 01 or a substitute providing equivalent liability coverage. In the event the Contractor does not own any vehicles, the Board will accept hired and non-owned coverage in the amounts listed above. In addition, the Board will require an affidavit signed by the Contractor indicating the following:

Contractor does not own any vehicles. In the event, the Contractor acquires any vehicles through the term of this contract, Contractor agrees to purchase "Any Auto" coverage as of the date of acquisition.

Contractor waives all rights against Board and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the business auto insurance maintained.

Commercial General Liability Insurance - The Contractor shall purchase and maintain commercial general liability (CGL) insurance including contractual liability and products and completed operations, bodily and personal injury, and property damages. The CGL shall be written on the most recent form of CG 00 01. The Board must be named as an additional insured under the CGL using ISO Additional Insured Endorsement CG 20 10 and CG 20 37 or their equivalent, providing additional insured coverage for both premises/operations and completed operations. This insurance including insurance provided under a commercial umbrella, if any, shall apply as primary insurance and non-contributory with respect to any other insurance or self-insurance programs afforded to or maintained by the Board utilizing ISO Form CG 20 01.

Coverage shall be for bodily and personal injury and property damages. Limits of liability shall be set at One Million Dollars (\$1,000,000.00) per occurrence. CGL insurance shall contain a general aggregate limit of Two Million Dollars (\$2,000,000.00).

Contractor waives all rights against Board and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the CGL insurance maintained.

Professional Liability Insurance – The Contractor shall procure and maintain Professional Liability Insurance for the life of this contract, plus two years after completion. This insurance shall provide coverage against such liability resulting from work performed by Contractor for the Licensee on or associated with the Board's Land. The minimum limits of coverage shall be \$1,000,000 with a deductible not to exceed \$10,000. The deductible shall be the responsibility of the Contractor.

10. Indemnification by the Licensee. Licensee recognizes its liability for certain tortious acts of its agents, officers, and employees and agrees to be responsible for all claims, liability, losses, and/or causes of action that may arise from any negligent act or omission due to the acts of its agents, servants, or employees, to the extent and limits provided by law, the Licensee being subject to the limits provided in Section 768.28, Florida Statutes, the State of Florida's partial waiver of Sovereign Immunity. The parties acknowledge that the foregoing shall not constitute an agreement by Licensee to indemnify the Board; that this provision shall not be construed as a waiver of any right or defense that Licensee has under said statute, nor as consent to be sued by third parties. Licensee covenants to maintain sufficient professional, general liability and workers' compensation coverage, unless self-insured, regarding its liability, throughout the term of License. This provision will survive the termination of this License.

11. Damage to Property. If any action of any User in the exercise of this License results in damage to the Board's Land and improvements thereon, the Licensee shall, at its option, either repair such damage using materials of like kind and quality or reimburse the Board for the costs associated therewith.

12. Description of Board's Land. The Board's Land subject to this License is located in the State of Florida, County of Palm Beach County, and is depicted as follows:

See Attached Exhibit B

13. Amendments of License. No modification, amendment, or alteration in the terms or conditions contained in this License shall be effective unless contained in a written document prepared with the same or similar formality as this License and executed on behalf of each party hereto.

14. Assignment of License. Neither this License nor any interest herein may be assigned, transferred or encumbered by Licensee without the prior written consent of the Board.

15. Authority of Parties. Each person signing this License on behalf of either party individually warrants that he or she has full legal power to execute this License on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this License.

16. Governing Law and Venue. This License shall be interpreted and construed in accordance with and governed by the laws of the State of Florida without regard to its conflict of laws provisions. The parties agree that any controversies or legal disputes arising out of this License and any action involving the enforcement or interpretation of any rights hereunder shall be submitted to the jurisdiction of the State courts of the Fifteenth Judicial Circuit of Palm Beach County, Florida.

17. Equal Opportunity Provision. The parties agree that no person shall, on the grounds of race, color, sex, national origin, disability, religion, ancestry, marital status, sexual orientation, gender, gender identity or expression be excluded from the benefits of, or be subjected to any form of discrimination under any activity carried out by the performance of this License.

18. Default of Obligations. The parties agree that, in the event either party is in default of its obligations under this License, the non-defaulting party shall provide to the defaulting party ten (10) days written notice to cure the default. In the event the defaulting party fails to cure the default within the ten (10) day cure period, the non-defaulting party shall be entitled to seek any remedy available to it at law or equity, including, but not limited to, the right to terminate this License and seek damages, if any.

19. Termination of License. This License may be canceled with or without cause by either party during the term hereof upon thirty (30) days written notice to the other party of its desire to terminate this License. The Board's Superintendent shall be delegated the authority to provide a notice of termination to Licensee, without further action of the Board. Termination of this License shall not affect any rights, obligations, and liabilities of the parties arising out of matters which occurred prior to termination.

20. Waiver of Jury Trial. EACH OF THE PARTIES HERETO HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVES THE RIGHT EITHER OF THEM MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION BASED HEREON, OR ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS LICENSE.

21. Waiver of Provisions. The parties agree that each requirement, duty and obligation set forth herein is substantial and important to the formation of this License and, therefore, is a material term hereof. Any party's failure to enforce any provision of this License shall not be deemed a waiver of such provision or modification of this License. A waiver of any breach of a

provision of this License shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this License.

22. Survival of Provisions. Provisions contained in this License that, by their sense and context, are intended to survive the expiration or termination of this License, shall so survive.

WITNESSES MY HAND AND SEAL this \_\_\_\_ day of \_\_\_\_\_, 2021.

VILLAGE OF WELLINGTON

THE SCHOOL BOARD OF PALM BEACH  
COUNTY, FLORIDA

By: \_\_\_\_\_  
Anne Gerwig, Mayor

BY \_\_\_\_\_  
Frank A. Barbieri, Jr., Esq., Chairman

ATTEST:

ATTEST:

\_\_\_\_\_  
Chevelle Addie, Village Clerk

\_\_\_\_\_  
Donald E. Fennoy II, Ed.D., Superintendent

Date: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AS TO FORM AND  
LEGAL SUFFICIENCY

REVIEWED AND APPROVED AS TO  
LEGAL FORM

\_\_\_\_\_  
Laurie Cohen, Village Attorney

\_\_\_\_\_  
School Board Attorney





EXHIBIT "A"  
DESCRIPTION OF COMMUNICATIONS EQUIPMENT

- Quantity 1 – Tropos 14203060G wireless mesh node
- Quantity 1 – Tycon RPST1224-100-80 RemotePro outdoor solar power system
  - Kit includes the following items:
    - Quantity 1 – Tycon TPSK12-80W solar panel and mounting hardware
    - Quantity 1 – Tycon ENC-STL-21x14x15 enclosure with the following installed within:
      - Quantity 1 - Tycon TP-SCPOE-1224 solar charge controller / POE injector
      - Quantity 2 - Tycon TPBAT12-52 batteries



MCIS, Inc.  
6550 New Tampa Hwy/Ste B  
Lakeland, Florida 33815  
Office 863-327-1095  
Fax 863-327-1091  
www.mciszone.com

## LETTER OF TRANSMITTAL

TO: Shannon LaRocque, P.E.  
Village of Wellington  
Wellington, FL

RE: Project #: Telemetry System Upgrade Phase II

☐ ATTACHED FOR YOUR USE

☐ FOR YOUR ACTION

☐ UNDER SEPARATE COVER

☐ PER YOUR REQUEST

DATE	QTY	DESCRIPTION
5/27/2020	1	005A - Tropos 1420 Mesh Router
6/25/2020	1	005B - Tropos 1420 Mesh Router

Please contact our office if you need any additional information.

MCIS, Inc.

PAUL GATES

- MCIS, Inc.

6/25/2020

Date

VILLAGE OF WELLINGTON  
TELEMETRY SYSTEM UPGRADE PHASE II

Shop Drawing

Submittal Number:	17400-01-5	.2	Tropos 1420 Mesh Router
Submittal Date:	June 25, 2020		
Submittal Title:	17400 - Telemetry System and Appuratenenses		
Part Number:	1420	Description:	Tropos 1420 Mesh Router
Cut Sheet Summary:	Outdoor mesh edge node for field automation applications		

Deviation Proposed :	No	<== YES / NO / Alt
Summary of Deviation:	None	
Detail Description of Deviation:		

Deviation Accepted:		<== YES/NO / TBR (to be reviewed)
Reason for Deviation Acceptance / Rejection / To Be Reviewed Comments:		

REVIEWED AND ACKNOWLEDGED BY:

PAUL GATES

Name (Print)

*Paul D. Gates*

Signature

06/25/20

Date

SPECIFICATION REFERENCE LIST:

Reference Identifier:	Specification Reference	Specification Description
1	Riser Diagram 2,3,4,6,7,9,10,13,14	Typical Mesh Node Router
2	Mounting Detail 1,2,3,4,5,6,7,8	Router , Mesh Node
3		
4		
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7		
8		
9		
10		
11		
12		

Note: MCIS my use alternative part number of equivalent specification

# TropOS 1420

## Outdoor mesh edge node for field automation applications



The TropOS 1420 provides superior reliability by accessing 653 MHz of RF spectrum (463 MHz in ETSI) using automatic interference avoidance capabilities of TropOS Mesh OS. It uses the 802.11a/b/g/n wireless standards to deliver 600 Mbps total wireless data rate, 300 Mbps at 2.4 GHz and another 300 Mbps at 5 GHz.

### Wireless

- IEEE 802.11b/g/n radio
  - Modulation: 802.11g/n - OFDM (64-QAM, 16-QAM, QPSK, BPSK); 802.11b - DSSS (DBPSK, DQPSK, CCK)
  - Media access protocol: CSMA/CA with ACK
  - TX power (dBm EIRP)

Band (MHz)	FCC	ETSI	Brazil
2400-2473	21-36	N/A	N/A
2400-2483	N/A	5-20	11-26

assumes use of 7.4 dBi antennas

- 2x2 MIMO-antenna system: 2-TX x 2-RX
- 7 dBi integrated omnidirectional antennas
- RX Sensitivity:
  - 98 dBm @ 1 Mbps
  - 96 dBm @ 6 Mbps

- IEEE 802.11a/n radio
  - Modulation: 802.11a/n - OFDM (64-QAM, 16-QAM, QPSK, BPSK)
  - Media access protocol: CSMA/CA with ACK
  - TX Power (dBm EIRP)

Band (MHz)	FCC	ETSI	Brazil
5150-5250	21-36	N/A	N/A
5250-5350	15-30	N/A	N/A
5470-5725	15-30	15-30	N/A
5725-5850	21-36	21-36	15-30

assumes use of 8 dBi antennas

TropOS 1420 wireless mesh edge nodes enable cost-effective, secure IP communications for utility, mining, oil and gas, and industrial applications that monitor and control field automation endpoints such as intelligent electrical devices, industrial process controllers and SCADA devices.

- 2x2 MIMO-antenna system: 2-TX x 2-RX
- 8 dBi integrated omnidirectional antennas
- RX sensitivity:
  - 95 dBm @ 6 Mbps
- Support for 802.11n MIMO
- Integrated GPS receiver

### Interfaces

- Full 802.11a/b/g/n wireless, 802.11n client compatibility
- One 10/100/1000 BASE-T Ethernet port
- Serial: RS-232 or RS-485
- Protocols: DNP3, Modbus (RTU), Modbus (ASCII), raw (serial pass-through) and IEC 61850 support
- IPv4, IPv6-ready
- BGP
- 802.1q VLAN support (ESSID and IP based tagging)
- Support for static and dynamic addressing for wireless and wired clients
- Session-persistent mobility across subnets
- IP multicast forwarding, IGMPv3; IGMP Proxy
- Automatic rate, power, channel and band control
- IEC 61850 GOOSE messaging
- Reliable broadcast
- Network Address Translation (NAT) support for wired clients

### Quality of service

- 802.11e 802.11e WMM
- 802.1p/q with 4 queues per VLAN and ESSID
- 802.1p and DSCP
- VoIP and VoWiFi support

### Management

- Local and remote management tools via HTTPS
- Role-based authentication (4 levels)
- Configuration save and restore
- Over the air software upgrades
- SNMP (standard MIBs)
- Wireless, network and client monitoring and statistics
- Infrared (IR) port
- Wireless rescue

### Security

- IPsec VPNs with tunnels to wired client interfaces using AES
- Authentication: WPA, WPA2, 802.11i, RADIUS, 802.1x (includes EAP-TLS, EAP-TTLS, EAP-SIM, PEAP)
- Encryption: open, WEP, TKIP, AES-CCM
- AES encryption of mesh and control traffic
- Technical controls required to achieve NERC CIP v5 compliance
- Multiple BSSIDs & ESSIDs (ESSID suppression)
- Integrated firewall
  - Packet filtering on TCP/UDP port, protocol, SA, DA
  - Peer-to-peer blocking
  - Client access control lists
- Evil twin detection and reporting
- Denial of service (DoS) attack detection and reporting
- Jamming attack detection and reporting

### Environmental specifications

- Operating temperature range: -40°C to 75°C
- Storage temperature range: -40°C to 85°C
- Weather rating: IP67 UL579/IEC 60529 IP67
- Wind survivability: >165 mph
- Wind loading (165 mph): <210 Newtons
- ASTM B117 salt fog rust resistance compliant
- Shock & vibration: ETSI 300-19-2-4 spec T4.1E class 4M3
- Transportation: ISTA 2A

### Power

- 802.3at on the 10/100/1000BASE-T port
- 12-48 VDC on Serial port
- 120/240 VAC with optional, external accessory (optional external battery backup available)
- Power consumption: 4 W typical
- Power-on and network status LEDs

### Physical

- Dimensions (w/o mounting brackets): 8.75" (22.2 cm) x 7.25" (18.4 cm) x 14" (35.6 cm) high with antennas
- Weight: 5 lbs (2.3 kg) max., without mounting brackets
- Outdoor pole mounting kit and cable glands included with each unit

### Wireless approvals

- FCC CFR 47 Part 15
- Industry Canada RSS 210
- EN 301 489-17
- EN 300 328
- EN 301 893
- EN 302 502
- Radio Equipment Directive (RED) compliant

### Safety approvals

- EN 60950
- IEC 950
- UL 60950-1
- CSA 22.2 No. 60950-1
- UL 579/IEC 60529 IP67 rated for outdoor use
- UL 1449/IEC 60664-1
- CE
- IEEE 1613

### Protection

- Antenna protection integrated
- Electrical protection:
  - EN61000-4-4 Level 2 electrical fast transient burst immunity
  - EN61000-4-3 Level 2 EMC field immunity
  - EN61000-4-2 Level 2 (contact), Level 3 (air) ESD immunity

### Warranty

- Five (5) year hardware warranty
- Software and hardware maintenance plans available

Click the link to find out more information about our [wireless mesh routers](#).

ABB Wireless  
3055 Orchard Drive  
San Jose, CA 95134

Phone: 408-331-6800  
Email: [wireless.sales@nam.abb.com](mailto:wireless.sales@nam.abb.com)

[abb.com/unwired](http://abb.com/unwired)

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Office 863-327-1095  
Fax 863-327-1091  
www.mciszone.com

## LETTER OF TRANSMITTAL

TO: Shannon LaRocque, P.E.  
Village of Wellington  
Wellington, FL

RE: Project #: Telemetry System Upgrade Phase II

☐ ATTACHED FOR YOUR USE

☐ FOR YOUR ACTION

☐ UNDER SEPARATE COVER

☐ PER YOUR REQUEST

DATE	QTY	DESCRIPTION
5/27/2020	1	009A - Tycon Outdoor Remote Power System

Please contact our office if you need any additional information.

MCIS, Inc.

PAUL GATES

- MCIS, Inc.

5/27/2020

Date

VILLAGE OF WELLINGTON  
TELEMETRY SYSTEM UPGRADE PHASE II

Shop Drawing

Submittal Number:	17400-01-9.1	Tycon Outdoor Remote Power System
Submittal Date:	May 28, 2020	
Submittal Title:	17400 - Telemetry System and Appuratenes	
Part Number:	RPST1224-100-80	Description: Tycon Outdoor Remote Power System
Cut Sheet Summary:	Complete Remote Power Solutions for off-grid operation	

Deviation Proposed :	No	<== YES / NO / Alt
Summary of Deviation:	None	
Detail Description of Deviation:		

Deviation Accepted:		<== YES/NO / TBR (to be reviewed)
Reason for Deviation Acceptance / Rejection / To Be Reviewed Comments:		

REVIEWED AND ACKNOWLEDGED BY:

PAUL GATES

Name (Print)



Signature

05/28/20

Date

SPECIFICATION REFERENCE LIST:

Reference Identifier:	Specification Reference	Specification Description
1	Riser Diagram 6	Solar Pannel
2	Mounting Detail 5	New Solar Powered mesh Node
3		
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**RPST RemotePro®**

## DATA SHEET

### Outdoor Remote Power Systems

#### Features

- Complete Remote Power Solution for Off-Grid Operation
- Weatherproof Outdoor Enclosure with up to 200Ah Battery
- Enclosures can be Wall or Pole Mounted
- High Performance Sealed Lead Acid Batteries
- PWM Charge Controllers
- Thermostatically Controlled Ventilation



#### Applications

- Wireless Base Stations
- Surveillance Cameras
- Wireless Bridge and Repeaters
- Off Grid Power
- Remote Lighting
- Backup Power Systems

#### Description

The RPST RemotePro® series outdoor power systems are designed for applications that require a primary off-grid power source to run various equipment. The vented weatherproof enclosures have generous space available inside for mounting customer equipment. Multiple DIN Rail mount features are provided.

All enclosures are hinged and gasket sealed with tamper resistant locks for security. The enclosures can be mounted to a wall or pole with the included mounting bracket system.

The high quality solar panels have a 25year power output guarantee. The panel come with a side of pole mounting bracket for mounting to a pole or wall.

There are 12V and 24V battery configurations with 24V and 48V PoE outputs up to 30W. There are also systems which feature a 20A output unregulated solar controller for higher output power. Enclosures have four cable gland ports for CAT5/6 cable, antenna cables/connectors or other cabling. The enclosures include a thermostatically controlled fan assembly which turns on automatically when the temperature exceeds 45°C.

Batteries are a Non-Spillable Valve Regulated Sealed Lead Acid Advance Glass Matt (AGM) type which have excellent temperature and deep discharge performance. Expected battery life exceeds 5years.

The systems come with all cabling required to connect the batteries to the controller and 20' outdoor rated cable to connect the solar panels to the controller.



RPST with 100Ah of battery



RPST with 200Ah of battery



80W Solar Mount



160W / 320W Solar Mount



**Specifications**

	RPST12xx-100-80	RPST12-xxx-160	RPST12xx-xxx-160	RPST24-xxx-160	RPST24xx-xxx-160	RPST12-200-320	RPST24-100-320	RPST24xx-100-320
Rated Power Generation	20W	25 or 40W	25 or 40W	25 or 40W	25 or 40W	50W	50W	50W
Reserve Time @ Rated Power	30hrs	30hrs	30hrs	30hrs	30hrs	24hrs	24hrs	24hrs
PoE Output Voltage (DC) 30W	24V or 48V	No PoE	24V or 48V	No PoE	24V or 48V	No PoE	No PoE	24V or 48V
Load Out (DC)	11V-15V 1.5A	11V-15V 20A	11V-15V 1.5A	22V-29V 20A	24V 1.5A Regulated	11V-15V 20A	22V-29V 20A	24V 1.5A Regulated
12V Battery Capacity (Amp Hrs)	100Ah	100 or 200Ah	100 or 200Ah	100 or 200Ah	100 or 200Ah	200Ah	200Ah	200Ah
Battery Voltage (DC)	12V	12V	12V	24V	24V	12V	24V	24V
Battery Type		Maintenance Free Non-Spillable Valve Regulated Sealed Lead Acid AGM						
Battery Life		5+years						
Solar Controller Type		PWM (Pulse Width Modulated)						
Overcharge Protection	14.4V	14.4V	14.4V	28.6V	28.6V	14.4V	28.6V	28.6V
Over-discharge protection	11.0V	11.0V	11.0V	22V	22V	11.0V	22V	22V
Over-discharge recovery volts	12.0V	12.0V	12.0V	24.8V	24.8V	12.0V	24.8V	24.8V
Controller Self Consumption		<0.5W						
Enclosure Type		Pole/Wall Mount, Powder Coat Steel						
Enclosure External Size		24 x 15 x 14" (610 x 381 x 356mm)						
Enclosure Internal Size		23 x 14 x 12" (584 x 356 x 305mm)						
Internal Mount Features		Din Rail Mounts (3)						
Solar Panel Dims	34" x 26" (855x666mm)	67" x 26" (1710 x 666mm)				67" x 52.4" (1710 x 1332mm)		
Operating Temperature		-30°C to +60°C (-22°F to 140°F)						
System Weight (no batteries)	86lb (39kg)	109lb (49kg)				136lb (62kg)		
Battery Weight	81 lb (37kg)	161 lb (73kg)						
Wind Speed Rating		90MPH						
Warranty		3 Years						

**RPST 12xx-200-320**

Enclosure Type  
ST - Powder Coat Steel

Battery Voltage  
12 - 12V  
24 - 24V  
xx = PoE Voltage  
(24 or 48)

Storage Capacity  
50 - 50Ah @ Rated Volts  
100 - 100Ah @ Rated Volts  
200 - 200Ah @ Rated Volts

Solar Panel Output  
80 - 80 Watt  
160 - 160 Watt  
320 - 320 Watt

**System Ordering:**

Model #	Continuous Power Generation (6hrs peak sun)	Backup Time	Battery Voltage	PoE Output Voltage	12V Battery Capacity	Solar Panel Size
RPST1224-100-80	20W	>30hrs	12VDC	24V	100Ah	80W
RPST1248-100-80	20W	>30hrs	12VDC	48V	100Ah	80W
RPST12-100-160	25W	>24hrs	12VDC	---	100Ah	160W
RPST1224-100-160	25W	>24hrs	12VDC	24V	100Ah	160W
RPST1248-100-160	25W	>24hrs	12VDC	48V	100Ah	160W
RPST24-50-160	25W	>24hrs	24VDC	---	100Ah	160W
RPST2424-50-160	25W	>24hrs	24VDC	24V	100Ah	160W
RPST2448-50-160	25W	>24hrs	24VDC	48V	100Ah	160W
RPST12-200-160	40W	>30hrs	12VDC	---	200Ah	160W
RPST1224-200-160	40W	>30hrs	12VDC	24V	200Ah	160W
RPST1248-200-160	40W	>30hrs	12VDC	48V	200Ah	160W
RPST24-100-160	40W	>30hrs	24VDC	---	200Ah	160W
RPST2424-100-160	40W	>30hrs	24VDC	24V	200Ah	160W
RPST2448-100-160	40W	>30hrs	24VDC	48V	200Ah	160W
RPST12-200-320	50W	>24hrs	12VDC	---	200Ah	320W
RPST24-100-320	50W	>24hrs	24VDC	---	200Ah	320W
RPST2424-100-320	50W	>24hrs	24VDC	24V	200Ah	320W
RPST2448-100-320	50W	>24hrs	24VDC	48V	200Ah	320W

**Must Have Accessories:**Tycon® BreezePro® 400W Wind Turbine

(pn TPW-400DT-12/24)

- Generates power on stormy days when there is limited sun.
- Auto ranging 12VDC or 24VDC
- Integrated controller and dump load

Tycon® Remote Monitoring and Control

(pn TPDIN-Monitor-WEB2)

- Remotely monitor battery levels and overall system performance. Measure 4 voltages, 4 currents and 2 temperatures.
- Turn various equipment off or on remotely
- HTTP WEB interface, SNMP
- DIN Rail mounting, PoE or wire terminal powered

**For further information contact:**[Tyconsystems.com](http://Tyconsystems.com)



MCIS, Inc.  
6550 New Tampa Hwy/Ste B  
Lakeland, Florida 33815  
Office 863-327-1095  
Fax 863-327-1091  
www.mciszone.com

## LETTER OF TRANSMITTAL

TO: Shannon LaRocque, P.E.  
Village of Wellington  
Wellington, FL

RE: Project #: Telemetry System Upgrade Phase II

☐ ATTACHED FOR YOUR USE

☐ FOR YOUR ACTION

☐ UNDER SEPARATE COVER

☐ PER YOUR REQUEST

DATE	QTY	DESCRIPTION
5/27/2020	1	016A - OSP Armored CAT5E

Please contact our office if you need any additional information.

MCIS, Inc.

PAUL GATES

- MCIS, Inc.

5/27/2020

Date

VILLAGE OF WELLINGTON  
TELEMETRY SYSTEM UPGRADE PHASE II

Shop Drawing

Submittal Number:	17400-01-16.1	OSP Armored CAT5E
Submittal Date:	May 28, 2020	
Submittal Title:	17400 - Telemetry System and Appuratenenses	
Part Number:	EnduraGainCat5e	Description: OSP Armored CAT5E
Cut Sheet Summary:	EnduraGain OSP Armored	

Deviation Proposed :	No	<== YES / NO / Alt
Summary of Deviation:	None	
Detail Description of Deviation:		

Deviation Accepted:		<== YES/NO / TBR (to be reviewed)
Reason for Deviation Acceptance / Rejection / To Be Reviewed Comments:		

REVIEWED AND ACKNOWLEDGED BY:

PAUL GATES



Name (Print)

Signature

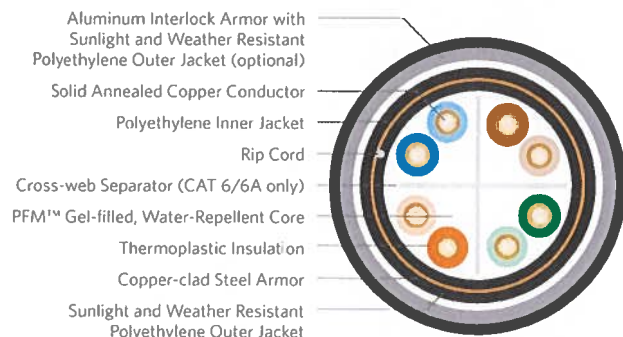
Date 05/28/20

SPECIFICATION REFERENCE LIST:

Reference Identifier:	Specification Reference	Specification Description
1	Riser Diagram 1-14	CAT5/E
2	Mounting detail 1-9	CAT5/E
3	Section 17400 - Part 2 - 2.02 A-D	Category 5E, Outside Plant (OSP) Broadband Cable
4	Section 17400 - Part 2 - 2.01 B	CAT-5E
5		
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12		

# EnduraGain® OSP Armored

Formerly BBDG



## SPECIFICATIONS

Pair Count	4
Conductor	Solid annealed copper
Insulation	Polyolefin
Separator	CAT 6A/6: Polyolefin cross-web CAT 5e: none
Inner Armor	Electrically continuous 0.005 in (0.13 mm) corrugated copper-clad steel armor, applied with an overlap
Dry Water Block	SAP yarn
Jacket	Black, sunlight and weather resistant polyethylene
Optional Outer Armor	Interlocked aluminum armor covered with black, sunlight and weather resistant polyethylene jacket
Characteristic Impedance Ohms	100 ± 15
Nominal Velocity of Propagation %	CAT 6A/6: 68 CAT 5e: 65
Performance Compliance	ANSI/TIA-568-C.2 ANSI/ICEA S-107-704-2012 RoHS-compliant/RoHS 2-compliant REACH-compliant

## ENVIRONMENTAL SPECIFICATIONS AND TESTS

Operation	-40°F to +167°F (-40°C to +75°C)
Installation	-40°F to +140°F (-40°C to +60°C)
ANSI/ICEA S-100-685-2009 Tested down to -67°F (-55°C)	Section 7.1: -4°F (-20°C) cold bend test Section 7.2: +14°F (-10°C) cold impact test Section 7.3: -40°F (-40°C) anvil test

## PART NUMBERS AND PHYSICAL CHARACTERISTICS

Category	Part Number	Product Type	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
CAT 6A	04-001-A5	Armored	23 (0.57)	0.39 (9.8)	72 (107)	1,000' Plywood reel
CAT 6	04-001-65	Armored	23 (0.57)	0.39 (9.8)	72 (107)	1,000' Plywood reel
CAT 5e	04-001-55	Armored	24 (0.51)	0.36 (9.1)	60 (89)	1,000' Plywood reel

Additional part numbers, constructions and packaging available upon request.

## PRODUCT DESCRIPTION

EnduraGain® OSP Armored is a robust category cable designed to provide an extension of the LAN beyond the premises or in situations where the NEC code requires an OSP-rated cable when it is in contact with earth, whether in a conduit or not. The cable consists of four (4) balanced twisted pairs surrounded by Superior Essex PFM™ gel that does not drip or flow, even in cell tower applications at elevated temperatures. The jacketed core is covered with dry block and a corrugated, copper-clad steel armor providing exceptional Alien Crosstalk (AXT) performance. The outer jacket is an OSP-grade black polyethylene for superior sunlight and abrasion resistance. This armored design is suitable for the following deployments: duct, underground conduit, tower, lashed aerial, direct burial or open trench.

EnduraGain OSP Armored is available in a variety of performances including CAT 5e, CAT 6 and CAT 6A. An optional Aluminum Interlock Armor with overjacket is also available (not suitable for tower deployment).

## APPLICATIONS

- CAT 6A: 10BASE-T through 10GBASE-T Ethernet;
- CAT 6/5e: 10BASE-T through 1000BASE-T Ethernet
- Power over Ethernet (PoE) - IEEE 802.3af
- PoE+ - IEEE 802.3at Type 1 and 2
- ATM and token ring

## FEATURES

- Transmission performance characterized to 500 MHz for CAT 6A/6 and 350 MHz for CAT 5e
- Corrugated, copper-clad steel armor
- Dry block between armor and inner jacket
- PFM gel-filled core construction
- OSP-grade black polyethylene jacket
- ColorTip® circuit identification system
- Aluminum interlock armored construction

## BENEFITS

- Assures ample overhead for reliable transmission in an OSP-rated cable allowing extension of the premises LAN
- Rugged shield provides protection against EMI/RFI and provides rodent resistance
- Prevents water ingress between armor and inner cable preventing damage to equipment
- Prevents intrusion of moisture and easily wipes clean during installation
- Outside plant rated cable for years of reliable performance
- Easily identifiable conductor mates even in low-light environments
- Protects against mechanical stresses
- Installs faster and easier than EMT conduit and conventional wire



## TECHNICAL GUIDELINE

Special connectivity is required for these cable designs. Bonding and grounding is important to prevent EMI. Refer to the "Resources" section on our site for the Technical Guideline, "OSP Broadband Installation Guidelines," for more information.



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Office 863-327-1095  
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## LETTER OF TRANSMITTAL

TO: Shannon LaRocque, P.E.  
Village of Wellington  
Wellington, FL

RE: Project #: Telemetry System Upgrade Phase II

☐ ATTACHED FOR YOUR USE

☒ FOR YOUR ACTION

☐ UNDER SEPARATE COVER

☐ PER YOUR REQUEST

DATE	QTY	DESCRIPTION
12/21/2020	1	053A – Solar Mount Structural Engineering

Please contact our office if you need any additional information.

MCIS, Inc.

PAUL GATES

- MCIS, Inc.

12/21/2020

Date



VILLAGE OF WELLINGTON  
TELEMETRY SYSTEM UPGRADE PHASE II

Shop Drawing

Submittal Number:	0000-01-53	.1	Solar Panel Mount (Structural Compliance)
Submittal Date:	December 21, 2020		
Submittal Title:	Solar Panel Mount (Structural Compliance)		
Part Number:	Description: Solar Panel Mount (Structural Compliance)		
Cut Sheet Summary:	Signed and Sealed Drawing for Structural Compliance of Mount for Solar Panel		

Deviation Proposed :	Yes	<== YES / NO / Alt
Summary of Deviation:	None	
Detail Description of Deviation:	Deviation from Manufacturer Provided Mount Requested. Mount Adjustment per Signed Seal Drawing Provided.	

Deviation Accepted:		<== YES/NO / TBR (to be reviewed)
Reason for Deviation Acceptance / Rejection / To Be Reviewed Comments:		

REVIEWED AND ACKNOWLEDGED BY: PAUL GATES		12/21/20
Name (Print)	Signature	Date

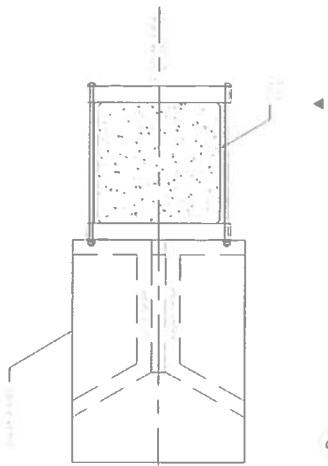
SPECIFICATION REFERENCE LIST:

Reference Identifier:	Specification Reference	Specification Description
1	Drawing E-18, Sheet 16 of 17	INSTALLATION DETAILS - SHEET 2. Mounting Bracket Furnished by the Manufacturer, Adjust as required by wind loading requirements. "Solar Panel Mounting Detail - Side View"
2		
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12		

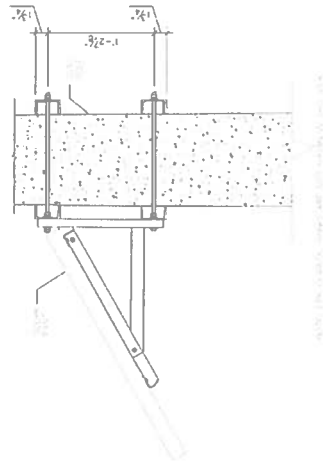
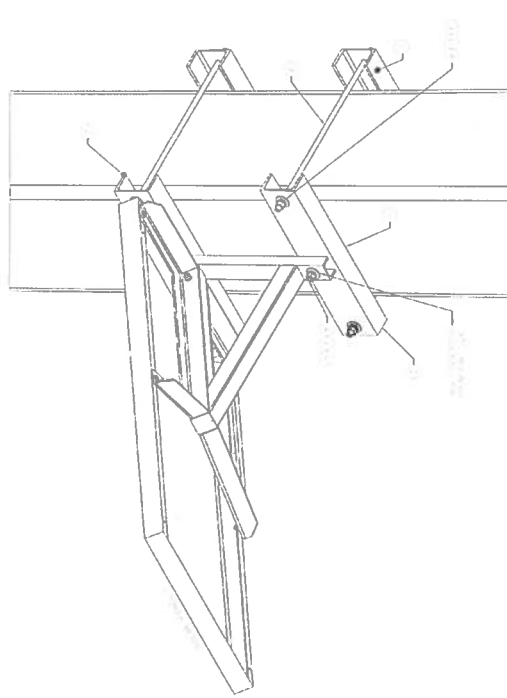
Note: MCIS my use alternative part number of equivalent specification







**B**  
2 2  
SOLAR PANEL PLAN



**B**  
2 2  
SECTION

VILLAGE OF WELLINGTON		TELEMETRY SYSTEM UPGRADE: PHASE II		mcis	
6197946-E-0900		SOLAR PANEL DETAILS		A	
DATE	08/27/08	BY	08/27/08	DATE	08/27/08
DESIGNED BY	08/27/08	CHECKED BY	08/27/08	DATE	08/27/08
SCALE	1" = 1'-0"	SCALE	1" = 1'-0"	SCALE	1" = 1'-0"
PROJECT	VILLAGE OF WELLINGTON TELEMETRY SYSTEM UPGRADE: PHASE II				
DESCRIPTION	SOLAR PANEL DETAILS				
REVISION					
NO.	1	DATE	08/27/08	BY	08/27/08
DESCRIPTION	SOLAR PANEL DETAILS				



EXHIBIT "B"  
SKETCH OF LICENSE AREA



Legend

- All equipment to be installed on existing TV pole
- (TV Pole)

All equipment to be installed on existing TV pole

\*28.39-12.6874, 80-1043.467W