# **INTREPID SYSTEM CONTROLLERS**

FLEXIBLE, BROAD-RANGING LOCAL AND REMOTE PERIMETER CONTROL OPTIONS





Universal INTREPID<sup>™</sup> System Controllers provide extensive perimeter security management options, enabling the development of an alarm monitoring and control program to suit each facility's unique requirements. INTREPID<sup>™</sup> System Controllers offer scalable, plug-and-play solutions to suit sites of any size or configuration, with features ranging from local or remote relay control to centralized, TCP/IP-based management of large or multi-site applications. Network-based control options support remote device configuration and monitoring capabilities for networked applications.

INTREPID<sup>™</sup> System Controllers conveniently and reliably manage all INTREPID<sup>™</sup> Series II perimeter detection systems - MicroPoint<sup>™</sup> II and MicroNet<sup>™</sup> II Fence Detection Systems, MicroTrack<sup>™</sup> II Buried Cable Detection System and MicroWave 330 Digital Microwave Link. Control modules also incorporate and operate contact-closure auxiliary security devices and interface with assessment equipment (CCTV/DVR) or other system outputs.

INTREPID<sup>™</sup> System Controllers facilitate the assignment of alarm inputs to specific perimeter segments - or zones - of desired lengths. For added flexibility, multiple sensor technologies can be assigned to a single zone. Zones may be associated with specific outputs - such as camera presets - so that when a perimeter breach is detected, precise visual assessment is achieved.

INTREPID controllers seamlessly integrate all Series II devices via a common, open architecture communications protocol using standard RS422 serial data interface. Communication connections may be made via copper wire, fiber optic cable or TCP/IP (CM II-N, PSM II, IPP II, RPM II).

Two SDK options are available to developers for high-level interface of INTREPID<sup>™</sup> Series II sensors into custom monitoring and control applications: INTREPID<sup>™</sup> Polling Protocol II (IPP II) and Remote Polling Module II (RPM II).



Relay Control Module II (RCM II) Control Module II-N (CM II-N) Remote Polling Module II (RPM II)



Graphic Control Module II-HD (GCM II-HD)



Perimeter Security Manager II (PSM II)



INTREPID<sup>™</sup> Polling Protocol II (IPP II) - SDK Remote Polling Module II (RPM II) - SDK

## **INTREPID**<sup>®</sup> SYSTEM CONTROLLERS

# **GRAPHIC CONTROL MODULE II-HD (GCM II-HD)**

The INTREPID<sup>™</sup> Graphic Control Module II-HD (GCM II-HD) is a dedicated, Linux-based graphic system controller designed to provide large or multi-site facilities with local GUI-based alarm monitoring and control of INTREPID<sup>™</sup> Series II devices, contactclosure auxiliary security devices and CCTV equipment. The GCM II-HD is supplied as a self-contained module, including system hardware and application software with graphic mapping capabilities for robust system configuration and management.

The GCM II-HD features a user-friendly GUI that allows system operators to efficiently manage their facility's perimeter security program by incorporating a high-resolution site map to display detection zones and active icons representing each system device.

The GCM II-HD functions as system Pollmaster - polling all INTREPID<sup>TM</sup> devices connected to its Communications port for status. When an intrusion attempt is detected from any INTREPID<sup>TM</sup> device or auxiliary input, its precise location is displayed on the graphic map and a command is issued to the appropriate output(s).

# **REMOTE POLLING MODULE II (RPM II)**

The Remote Polling Module II (RPM II) is an INTREPID<sup>™</sup> System Controller designed to provide network-based large or multi-site facilities with simplified high-level integration (via SDK) between a third-party control or monitoring systems and INTREPID<sup>™</sup> Series II sensors and auxiliary devices.

The RPM II is a self-contained hardware module with accompanying Software Development Kit (SDK) that eliminates the need for direct polling of each INTREPID<sup>™</sup> device by the third-party head-end system, reducing time, cost and complexity associated with interface development. The RPM II serves as Pollmaster - polling all INTREPID<sup>™</sup> Series II sensors and auxiliary devices connected to its communications port for status, and communicating this information to the third-party control or monitoring system via TCP/IP network connection.

\* For multi-site applications using the RPM II SDK, each site requires a unique RPM II System Controller.

## **KEY FEATURES**

- INTUITIVE, ICON-BASED GUI
- USER-FRIENDLY OPERATOR CONTROLS
- GUIDED NAVIGATION
- LOCAL OR REMOTE ADMINISTRATION
- 256 USER ACCOUNTS, 1024 ZONE RECORDS
- CONNECTS UP TO 32 DEVICES
- ALARM TAGGING AND REPORTS
- SUPPORTS MULTIPLE LANGUAGES
- ASCII OUTPUT FOR HIGH LEVEL CCTV INTERFACE
- FULLY HARDENED DESIGN

### **KEY FEATURES**

- PROVIDES INTERFACE VIA SDK TO INTREPID<sup>™</sup> SERIES II SYSTEMS
- NETWORK-BASED ALARM REPORTING
- LOCAL OR REMOTE ADMINISTRATION
- SINGLE OR MULTI-SITE MONITORING\*
- CONNECTS UP TO 16 DEVICES
- INTUITIVE SETUP SOFTWARE
- FULLY HARDENED DESIGN
- SECONDARY RELAY OUTPUT INTERFACE (128 ZONES)

# CONTROL MODULE II-N (CM II-N)

The CM II-N is a System Controller designed to provide midsized facilities with robust local or remote control of INTREPID<sup>™</sup> Series II sensors, contact-closure auxiliary security devices and CCTV monitoring equipment. It is supplied as a self-contained, fully-hardened module and features intuitive, software-based system configuration, zone assignment and management. The CM II-N supports TCP/IP network connection to enable remote configuration and maintenance of Series II sensors.

The CM II-N functions as system Pollmaster - polling all INTREPID<sup>™</sup> devices connected to its Communications port for status. When an intrusion attempt is detected from any INTREPID<sup>™</sup> device or auxiliary input, a command is issued to the appropriate local relay output(s). The CM II-N also supports remote alarm monitoring via TCP/IP network connection using ROM II-16-N relay output modules.

# **RELAY CONTROL MODULE II (RCM II)**

The Relay Control Module II (RCM II) is a fully-hardened INTREPID<sup>™</sup> System Controller designed to provide smaller facilities with cost-effective local control of INTREPID<sup>™</sup> Series II devices, contact-closure auxiliary security devices and CCTV equipment. The RCM II functions as system Pollmaster - polling all connected INTREPID<sup>™</sup> Series II devices connected to its Communications port for status. When an intrusion attempt is detected from any INTREPID<sup>™</sup> device or auxiliary input, a command is issued to the appropriate relay output(s).

### **KEY FEATURES**

- INTUITIVE SETUP SOFTWARE
- GUIDED NAVIGATION
- 8 ON-BOARD RELAYS
- CONNECTS UP TO 16 LOCAL DEVICES
- CONNECTS UP TO 4 REMOTE RELAY MODULES
- LOCAL OR REMOTE ADMINISTRATION
- LOCAL OR REMOTE ALARM MONITORING
- FULLY HARDENED DESIGN
- SUPPORTS MULTIPLE LANGUAGES

### **KEY FEATURES**

- SIMPLE ZONE RECORD SETUP VIA TERMINAL EMULATOR
- 8 ON-BOARD RELAYS
- GUIDED NAVIGATION
- CONNECTS UP TO 8 DEVICES
- OPERATES FROM 10.5 TO 60 VDC
- FULLY HARDENED DESIGN

# PERIMETER SECURITY MANAGER II (PSM II)

Perimeter Security Manager II (PSM II) is an advanced, Windows®-based security monitoring and control software package designed to provide large or multi-site facilities with local or remote GUI-based alarm monitoring and control of INTREPID<sup>™</sup> Series II sensors and contact-closure auxiliary security devices. PSM II also facilitates high level interface to CCTV equipment, incorporating live video and multi-layer graphic maps on a single display.

Refer to Southwest Microwave's Perimeter Security Manager II data sheet for complete system details and features.

## **KEY FEATURES**

- SINGLE OR MULTI-SITE MONITORING
- PLUG AND PLAY DEVICE INTEGRATION
- LIVE VIDEO, GRAPHIC MAPS ON ONE DISPLAY
- PATENTED MIGRATING 3+ REDUNDANCY
- CUSTOMIZABLE SCREENS AND EVENT PROCESSES
- SCALABLE TCP/IP ARCHITECTURE

# **INTREPID™ SOFTWARE DEVELOPMENT KITS (SDK)**

Two Software Development Kits (SDK) are available for high-level integration between INTREPID<sup>™</sup> Series II devices and custom monitoring and control applications. Depending on system design parameters, each provides a unique method for third-party systems to interface with INTREPID<sup>™</sup> Series II sensors and auxiliary devices.

**INTREPID Polling Protocol II (IPP II) SDK:** With this application-layer protocol, specific to serial line communications, each INTREPID<sup>™</sup> module is queried separately by the third-party control or monitoring application.

Remote Polling Module II (RPM II) SDK: With this application-layer protocol / hardware combination, specific to TCP/IP IPv4 socket communications, an RPM II System Controller is queried by the control or monitoring application. By eliminating the need for direct polling of each INTREPID<sup>™</sup> device by the head-end system, the RPM II SDK reduces interface development time, cost and complexity. Requires an RPM II System Controller, which handles polling of individual INTREPID<sup>™</sup> Series II sensors and auxiliary devices. Provides secondary relay output interface (128 zones).

Refer to Southwest Microwave's Software Development Kits (SDK) data sheet for complete details.

# SYSTEM CONTROLLER AND DEVICE CONFIGURATION

Each INTREPID<sup>™</sup> System controller can communicate with any combination of INTREPID<sup>™</sup> Series II devices via an open-architecture communications protocol using standard RS422 serial data interface.

SYSTEM	R5422 DEVICE 2 3 4 5 6 7 8 9 10
	DEVICE STRINGS CAN BE ANY COMBINATION OF THE FOLLOWING:
	MicroPoint II – Processor Module II (PM II)
	MicroTrack II – MicroTrack Processor II (MTP II)
CONTROLLER OPTIONS:	MicroWave 330
RCM II	Alarm Input Module II (AIM II)
CM II-N GCM II-HD	Relay Output Module II (ROM II)
PSM II SDK (IPP II or RPM II)	It is recommended that a maximum of 8 devices be connected to each port to maintain an alarm delivery time of 1 second or less. Communication between MicroPoint II processor modules may be achieved via RS422 or FSK.

CONTROLLER	COM PORTS	DEVICES	OUTPUTS	ZONES	TCP/IP / ETHERNET	SITES
RCM II	1	8	Relays	32	None	Single
CM II-N	2	16 Local 4 Remote*	Relays	256	Configuration/Maintenance, Alarm Reporting	Single
GCM II-HD	4	32	Graphic Map, Relays, ASCII for CCTV	1024	Maintenance, File Backup	Single
PSM II	99	240	Graphic Map, Relays, CCTV Drivers	Unlimited	Alarm Reporting	Multiple
IPP II SDK	Unlimited	Unlimited	High-Level Interface to Third-Party System	Unlimited	Alarm Reporting	Multiple
RPM II SDK	2	16	High-Level Interface to Third-Party System, Relays	Unlimited (HLI) 128 (Relays)	Configuration/Maintenance, Alarm Reporting	Multiple**

\* ROM II-16-N only.

\*\* RPM II System Controller required at each site.

# **INTREPID**<sup>®</sup> SYSTEM CONTROLLERS SPECIFICATIONS

### GRAPHIC CONTROL MODULE II-HD (GCM II-HD)

Operating Temperature: -40° C to 70° C (-40° F to 158°F) Size: 10.8 H x 22.7 W x 26.1 D cm (4.3 x 8.9 x 10.3 in) Weight: 5.22 kg (11.5 lbs) Input Power: 100 to 240 VAC Ports: RS232 [2], RS422 [4], RJ45 [1], USB2 [2], USB3 [6] Language(s): English, Spanish, Chinese, Russian, Turkish, Korean

### CONTROL MODULE II-N (CM II-N)

**Operating Temperature:** -40° C to 70° C (-40° F to 158°F) Size: 13.9 H x 33.7 W x 12.7 D cm (5.5 x 13.3 x 5 in) Weight: 1.36 kg (3 lbs) Input Power: 10.5 to 60 VDC

Current Draw: 12 VDC: 350 mA, 24 VDC: 185 mA, 48 VDC: 105 mA Outputs: 8 Alarm Relays SPDT (Form C), 2 amp @ 28 VDC Ports: RJ45 for network connection (1), USB-B (1), RS422 [2] Language(s): English, Spanish, Portuguese, Russian, Chinese, French, German Enclosure Rating: IP66

### PERIMETER SECURITY MANAGER II (PSM II)

Refer to Perimeter Security Manager II data sheet for Specifications.

### REMOTE POLLING MODULE II (RPM II)

Operating Temperature: -40° C to 70° C (-40° F to 158°F) Size: 13.9 H x 33.7 W x 12.7 D cm (5.5 x 13.3 x 5 in) Weight: 1.36 kg (3 lbs) Input Power: 10.5 to 60 VDC Current Draw: 12 VDC: 195 mA, 24 VDC: 100 mA, 48 VDC: 65 mA Ports: RJ45 for network connection (1), USB-B (1), RS422 [2] Language(s): English Enclosure Rating: IP66

### RELAY CONTROL MODULE II (RCM II)

Operating Temperature: -40° C to 70° C (-40° F to 158° F) Size: 13.9 H x 33.7 W x 12.7 D cm (5.5 x 13.3 x 5 in) Weight: 1.36 kg (3 lbs) Input Power: 10.5 to 60 VDC Current Draw: 12 VDC: 220 mA, 24 VDC: 125 mA, 48 VDC: 70 mA Outputs: 8 Alarm Relays SPDT (Form C), 2 amp @ 28 VDC Ports: RS232 [1], RS422 [1] Language(s): English Enclosure Rating: IP66

#### SOFTWARE DEVELOPMENT KITS (SDK)

INTREPID Polling Protocol II (IPP II): Refer to Southwest Microwave Document #57A46504-A01 for Specifications.

Remote Polling Module II (RPM II): Refer to Southwest Microwave Document #57A46792-A01 for Specifications. Requires Remote Polling Module II (RPM II) System Controller.

### ALARM INPUT MODULE II (AIM II)

Size: 13.9 H x 33.7 W x 12.7 D cm (5.5 x 13.3 x 5 in) Weight: 1.36 kg (3 lbs) Operating Temperature: -40° C to 70° C (-40° F to 158° F) Input Power: 10.5 to 60 VDC Current Draw: 12 VDC: 115 mA, 24 VDC: 65 mA, 48 VDC: 40 mA Inputs: 8 Dry Contact Inputs Ports: RS422 (2) Language(s): English Enclosure Rating: IP66

#### RELAY OUTPUT MODULE II (ROM II-8/16/16-N)

**Size:** 13.9 H x 33.7 W x 12.7 D cm (5.5 x 13.3 x 5 in) Weight: 1.36 kg (3 lbs) Operating Temperature: -40° C to 70° C (-40° F to 158° F) Input Power: 10.5 to 60 VDC

**Current Draw:** 

- ROM II-8: 12 VDC: 205 mA, 24 VDC: 115 mA, 48 VDC: 65 mA
- ROM II-16: 12 VDC: 360 mA, 24 VDC: 190 mA, 48 VDC: 105 mA
- ROM II-16-N: 12 VDC: 505 mA, 24 VDC: 255 mA, 48 VDC: 150 mA Ports:

- ROM II-8/16: RS422 (2)

- ROM II-16-N: RJ45 for network connection (1), USB-B (1), RS422 (2) Outputs: 8 (ROM II-8), 16 (ROM II-16/16-N) Alarm Relays SPDT (Form C), 2 amp @ 28 VDC

Language(s): ROM II 8/16: English / Rom II-16-N: English, Spanish, Portuguese, Russian, Chinese, French, German Enclosure Rating: IP66

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OREP : 1305 ROUTE DE LOZANNE | 69380 DOMMARTIN | FRANCE | Téléphone +33 (0) 4 78 83 91 05 www.orep-securite.com

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### INTREPID<sup>™</sup> INPUT / OUTPUT MODULES

The INTREPID™ Alarm Input Module II (AIM II) and Relay Output Module II (ROM II) provide simple interface to contact-closure controlled alarm inputs or relay outputs that do not communicate on the INTREPID™ IPP II communications protocol.

Alarm Input Module II (AIM II): Allows the incorporation of auxiliary devices - such as Southwest Microwave's conventional sensors, gate and door contacts or other alarm contacts. Provides 8 supervised contactclosure inputs.\*

Relay Output Module II-8 (ROM II-8) / II-16 (ROM II-16): Provide simple local interface to CCTV equipment, legacy alarm panels, perimeter lighting or other relays. Provides 8 relay outputs (ROM II-8) or 16 relay outputs (ROM II-16).\*

Relay Output Module II-16-N (ROM II-16-N): A network-based output module that provides simple remote interface to CCTV equipment, legacy alarm panels, perimeter lighting or other relays over TCP/IP network. Requires use of CM II-N System Controller\*\*.

\* An INTREPID™ System Controller such as RCM II, CM II-N, GCM II-HD or PSM is required to configure the inputs / outputs of the AIM II / ROM II-8/16.

\*\* CM II-N System Controller is required to configure the outputs of the ROM II-16-N.