

CPAT® ITX1

// Ingress Monitoring / Vehicle-based RF Transmitter Module

The ITX1 module is a radio that continuously transmits a low power ingress test carrier in the cable upstream band, while technicians are driving out the plant during their daily work routine. With the CPAT FLEX (US Patent: 7,360,124 – CAN Patent: 2,535,269) ingress monitoring solution, you take the 'find' time out of the 'find-and-fix' equation, diminishing subscriber downtime related to ingress impairments.

- Cost-effective transmitter operating on a fixed upstream frequency
- Continuous transmission of ingress test carrier via vehicle's antenna
- Determines ingress location with a precision of ± 2.5 meters
- Robust digital modulation scheme to perform under severe noise conditions
- Transmitted power compliant with FCC regulations (no operating license required)
- No user intervention required to operate

// Ingress transmitter module (ITX1)

The ITX1 module (US Patent Pending: 13/187545 – CAN Patent Pending: 2,746,924) consists of a radio transmitter connected to the Autonomous Recording Device (ARD4) for ingress signal monitoring purposes. The ITX1 and ARD4 modules are installed in the technician's service vehicle. When the vehicle is driven by an ingress prone area, the transmitted digital ingress test signal enters the coaxial plant and travels up to the HE/Hub location for detection by the IRX1 ingress receiver. The test signal is specifically generated and configured to avoid any interference with the operator's return band signals, such as DOCSIS carriers. With the IRX1 high capacity processing power, there is no limit to the number of vehicles that can be equipped with an ITX1 transmitter module.

// Efficient upstream bandwidth usage

The ITX1 operates in the upstream band at 6.78 MHz. Since the transmitted signal has a very narrow bandwidth, broadcasting of the selected frequency will have minimal impact on current and future upstream services.



// Hands-off operation

No user intervention is required to operate the ITX1 module. The ITX1 continuously transmits a low power digitally modulated RF signal, while technicians are driving out the plant during their daily work routine. When a new ITX1 firmware release is available, upgrades are automatically uploaded as soon as the ITX1 communicates with the CPAT server through the vehicle's wireless communication link.

// Repair cycle

Once ingress impairment is detected and stored in the CPAT database, the technician uses an ITX1 and a web browsing capable cell phone to precisely and rapidly find-and-fix the source of the ingress impairment.

// Specifications

// Electrical

Operating frequency / Bandwidth	6.78 MHz: 30 kHz
TX antenna	Monopole (42 Inches)
Antenna gain	-25 dB
Radiated power@ 6.78 MHz	-8 dBm
Transmitted data	68 bits
Transmission duration	8 ms
Data repetition rate	10 times/sec
Communication port	6 pin compatible with ARD4
Power	12 VDC, 500mA

// Physical

Dimensions	3.4 cm x 10.8 cm x 22 cm / 1.32" x 4.27" x 8.66" (H x W x D)
Operating temperature	-20° to +60° C / -4° to +140° F

// Ordering Information

ITX1 – Ingress Transmitter Module @ 6.78 MHz	P/N 9910-AK
Includes: ITX1 module, ITX1/ARD4 interconnection cable (6 pins), Sub-VHF Antenna Kit and installation guide.	

// Accessory Options

Sub-VHF Antenna Kit	6110
Includes: Base and antenna.	
Antenna Mounting Base	6111
Sub-VHF Antenna	6112
ITX1/ARD4 Interconnection Cable	9255

// Related Items

IRX1 – Ingress Receiver @ 6.78 MHz	9920-A
ARD4 – WiFi Autonomous Recording Device Kit	9710-WK



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