

# CMD-N ARRIS OPTI MAX NODES

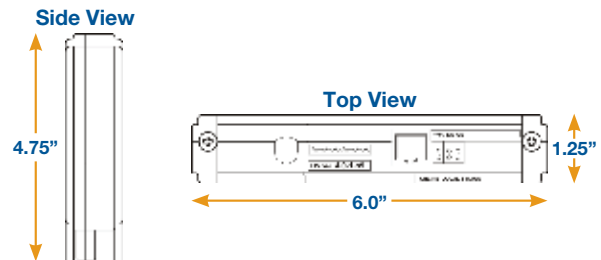
**TRANSPONDER FOR ARRIS OPTI MAX™ NODES,  
DOCSIS®-BASED, EMBEDDED TRANSPONDER FOR ARRIS OM2700,  
OM2741 AND OM4100 NODES**

## DOCSIS Transponder<sup>1</sup> Specifications



Powering	
<b>Power Consumption:</b>	PIN 2
<b>Maximum:</b>	4.4 W @ +24 VDC ±5%
<b>Typical, (assuming &lt;5% Transmit time):</b>	<4.0 W @ +24 V, 25°C ambient
<b>Power Conversion Efficiency (+24 V to +3.3 V, ±5%):</b>	85%, min.; goal >90%
RF Requirements (Forward RF in Port A; Return RF out Port B)	
<b>Input Return Loss (75 ohm nominal):</b>	-15 dBmV to +15 dBmV, 88 to 860 MHz, min.
<b>Output Return Loss (75 ohm nominal):</b>	+8 dBmV to +58 dBmV, 5 to 42 MHz
<b>Spurious from Input Return Loss<sup>2</sup>:</b>	-55 dBc 50-1000 MHz or <-35 dBmV 50 to 1500 MHz
<b>Spurious from Output Return Loss (+40 dBmV transmitted):</b>	-55 dBc 5-200 MHz or <-15 dBmV 5 to 200 MHz
<b>Return Loss:</b>	Greater than 8 dB typical
I <sup>2</sup> C Requirements and EMS Interface (PIN 19 I <sup>2</sup> C clock; PIN 3 I <sup>2</sup> C Data)	
<b>Specification:</b>	Phillips I2C Spec 2.1
<b>Mode:</b>	I <sup>2</sup> C Master
<b>Voltage:</b>	+3.3 VDC
<b>eMAP Rebuild/download<sup>3</sup>:</b>	At power up and plug-in module change
<b>Alarm limit values<sup>4</sup>:</b>	Default values from plug-in module at 1st power up. User values from daughter card subsequently
Indicators (DOCSIS Functionality Indicators)	
<b>(LEDs 1 - 5, all green):</b>	Power, DS, US, ONLINE (Link Activity), LOCAL (E-Link Activity)
<b>Status (LED 6, green):</b>	Varies (see Table 1.5, in the DOCSIS Transponder Equipment Manual (P/N 1506534))
Environmental Operation	
<b>Operating Temperature:</b>	-40 to 185°F (-40 to 85° C)
<b>Storage Temperature:</b>	-40 to 194°F (-40 to 90° C), compliant to IEC 68
<b>Humidity:</b>	0 to 95%, noncondensing
Environmental Operation	
<b>Dimensions (in/mm):</b>	6.0L x 1.2W x 4.84H / 152.4L x 30.48W x 122.94H
<b>Weight (eCMM + TMB and its components), max. (oz/g):</b>	16 / 453.59, typical
<b>Interface Connector (to node or amplifier):</b>	CVI LUX25W3PCH32175112 (on transponder)
<b>Local port connector(s):</b>	RJ-45
<b>Programming development/Debug Connector:</b>	RJ-45 Ethernet Port (Local Port)
<b>Tamper Switch-optical sensor type:</b>	Phototransistor sensor

DOCSIS Transponder Dimensions		
Characteristic:	Uncrated Measurements:	Crated Measurements:
<b>Width:</b>	6 inches (15.2 cm)	9.25 inches (23.5 cm)
<b>Height:</b>	4.75 inches (12.1 cm)	8.25 inches (21.0 cm)
<b>Depth:</b>	1.25 inches (3.2 cm)	3.0 inches (7.6 cm)
<b>Weight:</b>	1.04 pounds (0.47 kg)	1.48 pounds (0.67 kg)


**Notes:**
<sup>1</sup> The DOCSIS Transponder is presently available for the Opti Max4100 node and the Opti Max2700 node.

<sup>2</sup> Typical OM4100 Forward DOCSIS RF levels at DC-16 Transponder pick-off are +9/+2 dBmV minimum, 860/55 MHz, with 0 dB, plug in attenuator in Transponder input. Typical OM2700 Forward DOCSIS RF levels at Transponder input are -4 dBmV/6 MHz flat, minimum.

<sup>3</sup> eMAP download-Transponder provides function to download and display eMAP data via Telenet.

<sup>4</sup> Alarm limit values are the user alarms if a module of the same part number is submitted; default alarms if a different part is substituted. Remote Factory Reset causes the default alarms to be reloaded into the eMAP.