3140 OSP CARD AND CARD CAGE

The model 3140 Optical Signal Processor (OSP) is the most advanced of the 3000 Series OSP's offered by TOMAR. Installed inside the traffic cabinet, the 3140 provides power for 209X Optical Detectors, receives signals from the detectors, logs preemption and priority control activity, communicates with other traffic control devices, and optically isolates the preemption channels.

The 3140 is delivered default programmed to respond on a first-come, first-served basis to optical signals from vehicles within two signal bands. Emergency band signals are typically emitted by emergency vehicles to effect a preemption of normal traffic control timing and are given the highest priority to allow rapid emergency response with enhanced safety. Transit band signals are generally emitted by transit or other non-emergency municipal vehicles to effect a priority change for the vehicle's approach direction without necessarily interrupting traffic control timing. With the optional eLock emitter authenticator system installed, up to 65,000 vehicles in each signal band can be individually identified.

Using a simple Windows-based configuration program, the user can define up to 16 additional classes within each signal band with different priorities, detection ranges, and choices of actions, from simple logging to full traffic preemption.

Equipped with a serial port and the ability to classify and announce the presence of multiple vehicles in real-time, the 3140 makes an excellent intelligent vehicle sensor for ITS applications.

The 3140 OSP is compatible with NEMA TS-1, TS-2, and CA/NY 170, and 2070 controllers and meets all NEMA and CalTrans environmental requirements. The 3140 plugs directly into a 170 input file without any additional hardware and does not use the internal 24VDC cabinet power. For NEMA cabinets without prewired preemption slots, the TOMAR model 1881 rack provides the necessary hardware and harnessing to allow simple connection to detector outputs and controller inputs.

3140 OSP

The TOMAR 3140 Optical Signal Processor offers the following features and benefits:

Modular construction allows tool-less field repair and firmware upgrades. Competitive products must be returned to the factory for proper repair.

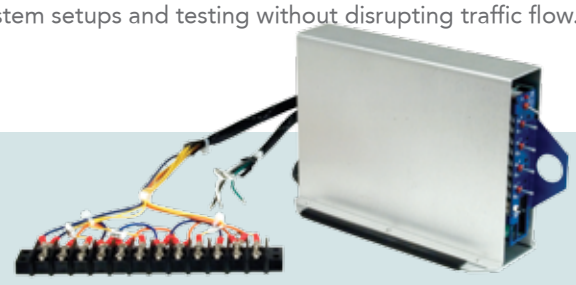
Plug-and-Play Firmware allows the ability to add preemption channels or other accessories in the field without manual configuration. This allows you to buy only what is needed today and add more capability later, saving precious funds.

Active Reflection Suppression prevents cross street preemption due to reflected emitter technology. Only TOMAR's advanced, digital signal processing can eliminate this troublesome side effect making system installation and setup far less critical.

Expansion Port provides easy connection of the 3140 to other accessory modules like the eLock emitter authentication system, green phase monitors, confirmation light drivers, and external preemption adapters for controllers that do not have internal preemption software.

Preemption channel disconnect switches allow the preemption outputs from the 3140 to be physically disconnected from the controller inputs during setup and testing. This allows traffic technicians the ability to perform all system setups and testing without disrupting traffic flow.

The 1881 Card Cage provides all the necessary hardware and harnessing required to allow the simple wiring of the 3140 card to the detector outputs and controller inputs. The 1881 is equipped with two 60" long cables which are wired to the controller. The first cable carries all 115 VAC power wiring, safety ground, and card outputs. The second cable is terminated to a 12 point terminal block which is typically mounted in the wiring compartment of the cabinet. The detectors are then connected to the terminal block.



1881 Card Cage and Harness

Specifications for OSP Card

Item	Description
Signal	The 3140 shall be capable of receiving and prioritizing the Emergency and Transit signals transmitted by all TOMAR and competitive emitters. The system shall be software configurable to accept or reject older non-identifying optical signals. The 3140 does not uniquely identify any emitter codes when accepting or rejecting non-coded optical signals.
Signal Acquisition Time	Typical signal acquisition time shall be approximately 2.5 seconds. Acquisition time will vary depending upon the number of signals present simultaneously and on the density of optical noise.
Range	2500 feet maximum adjustable down to 200 feet in 255 steps for each signal band.
Range Adjustment	Range adjustment shall be accomplished via front panel switches and emitter or via serial port command.
Priority Determination	The 3140 shall be delivered with default priority grouping, responding on a first-come, first-serve basis to signals within each signal band. Signals in the Emergency signal band shall be given priority over signals in the Transit signal band. Optionally, with the elock emitter authenticator system installed, the user shall be able to define additional priority classes within each signal band. Up to 16 priority groups within each signal band may be defined.
Event Logging	The system shall log all valid signal receipts along with the time, date, and duration of receipt. The logging capacity of the card shall be a minimum of 1300 events. The oldest events shall be discarded when newer events are received. The number of events to be stored shall be expandable by adding additional memory. The stored logs shall be downloadable via RS-232 port. The 3140's operating system shall allow connection to a controller, a local computer, or a modem.
Output Signals	The 3140 shall provide four optically isolated output channels for placing calls on the traffic controllers preempt inputs. All output signals shall comply with NEMA signal level definitions.
Control Timers	Each channel shall be equipped with 3 control timers described as: MAX CALL: Sets the maximum time a preempt call is allowed to be active. CALL EXTENSION: Sets the time a call is held after the optical signal terminates. CALL DELAY: Sets the time a call must be pending before the assertion of the call to the controller.
Electrical Requirements	120VAC 50/60 Hz
Temperature Range	-40 degrees Celsius to +75 degrees Celsius
Transient Protection	Input power is MOV protected from line transients.
Fusing	Input power connections are fused at 1/2 amp to prevent cabinet wiring damage in the event of an electrical failure.

Specifications for 1881 Card Cage and Harness

Item	Description
Mechanical	Height 5.80" (147.3mm) Length 8.06" (204.7mm) Width 2.90" (73.7mm)
Mounting	The 1881 can sit on mounting feet atop a shelf or can be hung, using the mounting holes in the top flange, under a shelf.
Construction	Anodized aluminum with upper mounting flange and lower mounting feet. Open frame with single 22/44 card edge connector and 60" long controller and detector terminal block cables.

True 10 Year Warranty:

The 3140 OSP and all STROBECOM II components are covered under the 10 year warranty. Unlike other manufacturers, TOMAR's warranty has NO FEES or charges for warranty repairs.

NOTICE: The sale of these items are restricted to state and local governments and to authorized distributors only.