

SMART™ Features:

Signal Monitoring and Readiness Terminal

Digital Inputs: Optically Isolated

# of Inputs	Input Configuration (Factory Set)	Notes
40	Non-powered contact	Accepts non-powered contact as input, signal is internally connected to either the internal 5VDC or 24VDC supply.
	Powered signals	Accepts external signal as input, either 5VDC or 24VDC level with minimum current drive of 15mA.
	Open collector signal	Accepts open collector signal, internally pulled up to either the internal 5VDC or 24VDC supply. The signal must be able to sink a minimum of 15mA.

Digital Outputs: Optically Isolated

# of Outputs	Output Configuration (Factory Set)	Notes
20	Non-powered contact	Provides non-powered solid-state contact as output. Maximum allowable signal level is 24VDC.
	Open collector output	Provides open collector type signal and <i>optionally</i> can be pulled up to the internal 5VDC power supply with 1KΩ resistor.
10	Non-powered contact	Provides non-powered solid-state contact as output. Maximum allowable signal level is 24VDC.

Note: Factory set signals cannot be changed in the field.

Standard Signal Grouping:

Signal Function	Signal Direction	# of Signals	Notes
Computer Interface	Input	15	Passes signals between the computer interface and the SMART unit.
	Output	4	
Computer Interface/Fire Control	Input	4	Passes signals through optical isolators from the feed-through inputs to the feed-through outputs. These signals pass information between the computer interface and fire (or propulsion) control equipment.
	Output	4	
Imager Interface	Input	2	Passes information between the imager units (up to 8) and the SMART unit. For 1 to 8 active imager networks.
	Output	2	
DAS Interface	Input	2	Passes information between the DAS units (1 or 2) and the SMART unit. For 1 or 2 active DAS networks.
	Output	2	



SMART Specifications

Standard Signals:

Interface

Signal Name	Signal Direction	Notes
Inhibit Imager	Input	Prevents selected imager unit from receiving the Ready signal from the SMART unit and causes the SMART unit to ignore the Ready Status and Fault Status signals from selected Imager unit. Quantity: up to 8 imagers.
Inhibit DAS	Input	Prevents selected DAS unit from receiving the Ready signal from the SMART unit and causes the SMART unit to ignore the Ready Status signal from selected DAS unit. Quantity: up to 2 DAS units.
ACK	Input & Output	This optically isolated signal is passed through the SMART unit without modification or monitoring. This signal is used as a handshaking signal from the SureFire system to the fire (or propulsion) control system.
Event Complete	Input & Output	This optically isolated signal is passed through the SMART unit without modification or monitoring. This signal is used as a handshaking signal from the fire control system to the SureFire system.
Abort	Input & Output	This optically isolated signal is passed through the SMART unit without modification or monitoring. This signal passes the abort condition from the fire control system to the SureFire system.
Ready Devices	Input & Output	This optically isolated signal is passed through the SMART unit without modification or monitoring. This signal passes information from the fire control system to the SureFire system.
Ready Imagers	Input	This signal from SureFire or fire control tells the SMART unit to ready the imagers to accept the trigger signal (T_0 signal).
Ready DAS	Input	This signal from SureFire or fire control tells the SMART unit to ready the DAS to accept the trigger signal (T_0 signal).
Auxiliary Trigger	Input	This signal is an auxiliary trigger (T_0 signal) distributed to all active devices via their independent trigger signals. Used for system checkout and testing thus not used during the course of a regular test.
Master Trigger	Input	This is the Trigger (T_0 signal) that is distributed to all the active imagers and DAS units via the independent trigger signals.
Master Trigger Reset	Input	This signal resets the Latched Trigger signal.
SureFire Ready	Input	SureFire to SMART signal indicating all auxiliary equipment is ready to accept trigger signal (T_0) signal. Normally generated by SureFire system for setup/control and to indicate hardware configuration completion.
Imagers Ready	Output	SureFire generated indicating that all active imagers are waiting for a trigger and have no faults.
DAS Ready	Output	SureFire generated to gate the Ready DAS signal, indicating that all active DAS units are waiting for a trigger and have no faults.
Imagers Okay	Output	Fire control system generated indicating that all active imagers are waiting for a trigger and have no faults.
DAS Okay	Output	Fire control system generated indicating that all active DAS units are waiting for a trigger, have no faults.
Latched Trigger	Output	This signal indicates that a trigger (T_0 signal) has been received. This signal must be cleared using the Master Trigger Reset prior to receiving the trigger in order to be valid.
SMART Fault	Output	This signal indicates that an imager, DAS, or SureFire is not in a ready state when appropriate or that the SMART unit has detected an internal voting logic fault, and requires repair.



SMART Specifications

Standard Signals: Imager

Signal Name	Signal Direction	Notes
Ready Status	Input	Accepts Ready status signal (imager is waiting for trigger) from an imager. Up to 8 imager networks are supported.
Ready	Output	Outputs Ready signal to prepare an imager to accept a trigger. Up to 8 imager networks are supported.
Fault Status	Input	Accepts Fault Status signal from imager.
Trigger	Output	Outputs Trigger (T ₀) signal to up to 8 imager networks.
<i>Note: All 8 imager network connections have the above signals whether used or not.</i>		

Standard Signals: DAS

Signal Name	Signal Direction	Notes
Ready Status	Input	Accepts Ready status signal (DAS is waiting for trigger) from a DAS unit. Up to 2 DAS networks are supported.
Ready	Output	Outputs Ready signal to prepare a DAS unit to accept a trigger. Up to 2 DAS networks are supported.
Trigger	Output	Outputs Trigger (T ₀) signal to up to 2 DAS networks.
<i>Note: Both DAS network connections have the above signals whether used or not.</i>		

Front Panel LED Indicators:

Group	Name	Group	Name	Group
Status	SureFire	DAS (1 and 2)	Inhibit	Imagers (1 to 8)
	Fault		Armed	
	Trigger		Ready	
	Power			
<i>Note: LEDs have various colors</i>				

Rear Panel Connections:

Device	Connector	Device	Connector
Imager Networks (1 to 8)	RJ-45	Master (1 and 2)	RJ-45
DAS Networks (1 and 2)	RJ-45	SureFire System (1 to 8)	RJ-45
Power	IEC Standard International Plug	Fans	2

Power and Environmental:

Main Power:	90 to 264VAC, 47 to 63Hz, Universal	<i>(Supply is CE approved)</i>
	1.2A/115VAC or 0.7A/230VAC	
Operating Temperature:	+5°C to +35°C, non-condensing	
Storage Temperature:	-25°C to +50°C, non-condensing	
Operating Humidity:	5 to 80%RH @ 30°C, non-condensing	
Storage Humidity:	5 to 50%RH @ 50°C, non-condensing	

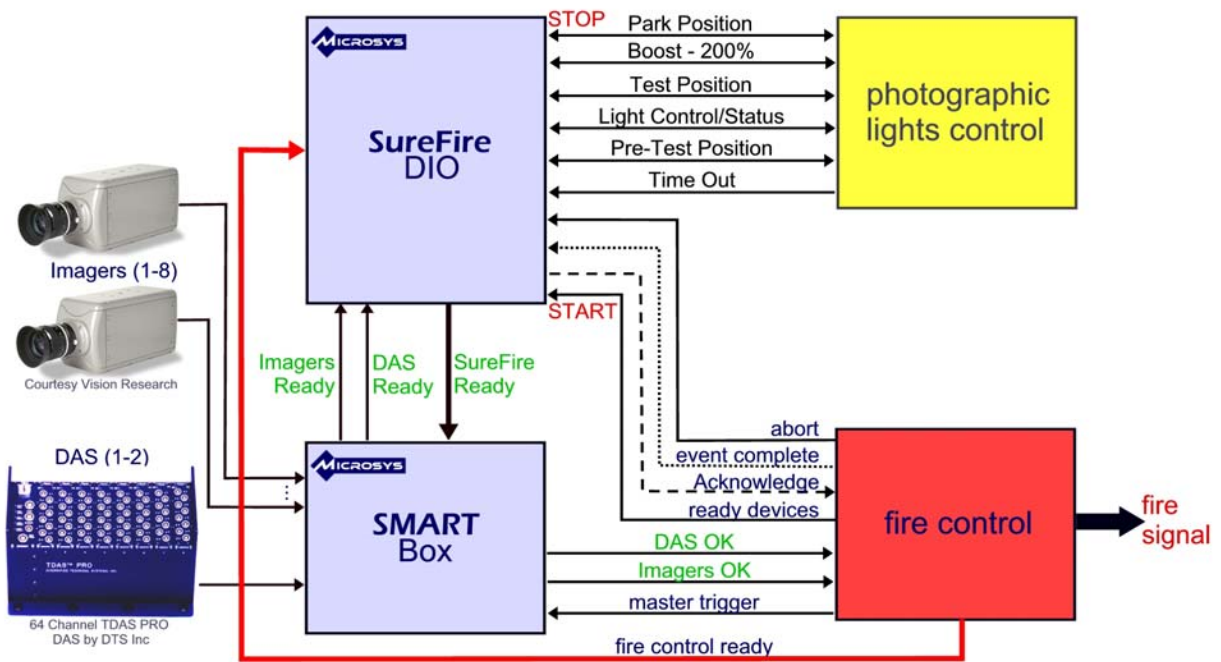


SMART Specifications

Size and Weight: Nominal

Dimensions:	Centimeters	4.5H x 43.2W x 28.3D cm
	Inches	1.75H x 17W x 11.125D in
	Rack-mounting	19 inch centers
Weight:	4.5kg	10lbs

Functionality Block Diagram:



Note: Specifications are subject to change without notice.
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