



Chrominance Family Datasheet Product Summary

Consult TouchNetix prior to design-in

1 Highlights

Chrominance multi-touch capacitive touch sensors and assemblies have the following features:

- *Based on TouchNetix' aXiom¹ controller with >80dB SNR for the best HMI performance in harsh environments*
- *Low sensor drive voltage for low RF emissions and long-term sensor reliability*
- *Industry-leading EMC performance*
- *16-bit XY multi-touch reporting of up to 10 concurrent touches*
- *'Dual mode' capacitive measurement for thick glove and water operation*
- *Support for very thick cover lenses including non-uniform (3D) surfaces*
- *Support for air gaps between the lens and sensor*
- *Programmable gain per node, so no issues with edge/corner sensitivity*
- *Reporting rates of up to 250Hz*
- *Narrow sensor edge margins*
- *Reference driver code for integration with Windows and Linux embedded systems*
- *Connection via USB mini-B connector or 10-way 1mm pitch ZIF FFC connector*
- *Supported by TouchNetix' proprietary TouchHub2 tuning/evaluation software for Windows™*
- *"Mouse emulation" support in legacy OS and embedded versions of Windows™*
- *Bare sensor supplied as 0.7mm thick glass substrate with bonded passive FPC*
- *3D CAD STEP files available*
- *Proximity and hover sensing ('Touchless UI')*
- *Support for 'dial on display'²*
- *Force/press sensing and haptics triggering - Contact TouchNetix for further information*

¹ See TNxD00338/339/366-xx_aXiom_AX112A/AX80A/AX54A_Touch_Controller_Datasheets. Available on request

² Dial on display, addition of a passive dial to the lens that can be used to create rotational gestures.
See TNxAN00055_aXiom_Dial_On_Display_Quick_Start

2 Ordering Part Numbers

2.1 Touch Sensor Assemblies

Name	Order Code				LCD display AA size (mm)		Sensor Size (mm)	
	Sensor Assy	Diagonal	Aspect Ratio	Orientation	Long Axis	Short Axis	Long Axis	Short Axis
Sullivan	840-00127	7.0 inch	15:9	Landscape	152.45	91.47	164.00	106.50
Ersa	840-00141	8.0 inch	15:9	Portrait	174.00	104.40	190.00	120.00
Syn	840-00163	10.1 inch	16:10	Landscape	216.96	135.60	228.50	150.00
Marisha	840-00061	10.4 inch	4:3	Landscape	211.20	158.4	219.50	172.00
Elpis	840-00136	11.6 inch	16:9	Landscape	256.32	144.18	270.00	164.50
Loa	840-00071	12.1 inch	16:10	Landscape	261.12	163.20	274.00	187.20
Talos	840-00148	12.1 inch	4:3	Landscape	245.76	184.32	262.00	206.00
Clio	840-00073	15.6 inch	16:9	Landscape	344.23	193.54	355.00	210.50
Europa	840-00152	18.5 inch	16:9	Landscape	409.8	230.4	426.75	257.72
Nomos	840-00156	19.0 inch	5:4	Landscape	376.32	301.06	401.00	328.50
Rakim	840-00075	21.5 inch	16:9	Landscape	476.64	268.11	488.00	287.00
Thumper	840-00160	32.0 inch	16:9	Landscape	698.40	392.90	736.00	434.00

This sensor list will be updated as new sizes are released. Please contact TouchNetix for the current Chrominance sensor roadmap. All sensor types can be supplied with an additional active shield layer to facilitate hover and proximity sensing.

2.2 Control Boards

Order Code	Name	Touch Controller	Host Communications
830-00082	AX198A Chrominance Control Board	AX198-I-LQFP256	I2C and USB
830-00018	AX112A Chrominance Control Board	AX112A-I-LQFP156	I2C and USB
830-00071	AX80A Chrominance Control Board	AX80A-I-LQFP128	I2C and USB
830-00070	AX54A Chrominance Control Board	AX54A-I-QFN88	I2C and USB

2.3 Chrominance starter kit

The following kits are available.

Order Code	Order Description	Sensor	Controller
880-00054	Chrominance 7.0" starter kit	Sullivan	AX54A
880-00053	Chrominance 10.1" starter kit	Syn	AX80A
880-00038	Chrominance 12.1" starter kit	Loa	AX112A
880-00039	Chrominance 15.6" starter kit	Clio	AX112A
880-00040	Chrominance 21.5" starter kit	Rakim	AX112A
880-00062	Chrominance 32.0" starter kit	Thumper	AX198A

2.3.1 Chrominance starter kit contents

Description
Chrominance Sensor with shield laminated to standard lens (7", 10.1", 12.1", 15.6", 21.5", 32.0" resp.)
Chrominance Control Board (AX198A, AX112A, AX80A, AX54A resp.)
USB Cable (Type A Plug to Mini USB Type B Plug) 0.5m
TouchNetix TouchHub2 evaluation and tuning software for Windows 10
Metal Touch probe assembly ³

³ Metal touch is required when running auto-tuning algorithm in TouchHub2 software