Introduction to “CFX”

Next Generation High-Performance Media Based on PCIe and NVMe

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The Problem: Media requirements are rising

Recording Media Rate Requirements (Min Guaranteed Speed)

		Basic Frame Size (MB)	24 fps Data Rate (MB/Sec)	30 fps Data Rate (MB/Sec)	60 fps Data Rate (MB/Sec)	120 fps Data Rate (MB/Sec)	240 fps Data Rate (MB/Sec)	Performance for RAW No Comp
8K RAW	Uncompressed 8K RAW	53.1	1,274	1,593	3,185	6,370	12,740	12.5 GB/Sec +/- @ 240fps
	Compressed 8K RAW 3:1	17.7	425	531	1,062	2,123	4,247	
	Compressed 8K RAW 6:1	8.8	212	265	531	1,062	2,123	
6.5K RAW	Uncompressed 6.5K RAW	30.5	732	915	1,830	3,660	7,321	7.2 GB/Sec +/- @ 240fps
	Compressed 6.5K RAW 3:1	10.2	244	305	610	1,220	2,440	
	Compressed 6.5K RAW 6:1	5.1	122	153	305	610	1,220	
4K RAW	Uncompressed 4K RAW	14.2	340	425	849	1,699	3,397	3.4 GB/Sec +/- @ 240 fps
	Compressed 4K RAW 3:1	4.7	113	142	283	566	1,132	
	Compressed 4K RAW 6:1	2.4	57	71	142	283	566	
2.8K RAW	ARRI RAW 2.8K 16:9	7.0	168.0	210.0	420.0	840.0	1680.0	2.2 GB/Sec +/- @ 240fps
	ARRI RAW 2.8K HS 16:9	7.0	168.0	210.0	420.0	840.0	1680.0	
	ARRI RAW 2.8K 4:3	9.3	223.2	279.0	558.0	1116.0	2232.0	
2K RAW	Uncompressed 2K RAW	5.0	119.4	149.3	298.6	597.2	1194.4	1.2 GB/Sec +/- @ 240fps
	Compressed 2K RAW 3:1	1.7	39.8	49.8	99.5	199.1	398.1	
	Compressed 2K RAW 6:1	0.8	19.9	24.9	49.8	99.5	199.1	

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What is “CFX”

- “CFX”* is a code name to CFA’s next generation high-speed **removable** and **enclosed** memory card

- The intent of CFA’s work on “CFX” is to:
  - Create a family of form factors under one standard
  - Create a scalable platform that can address requirements for the next 15-20 years
  - Create a family of high-performance products for imaging, compute, enterprise and industrial markets

- Leverage proven technology from hosts and SSDs (client and enterprise) such as PCIe and NVMe

- “CFX” 1.0 is scheduled to be ratified in Q4’16 while “CFX” 1.x is planned to follow in 1H’17

* Note: “CFX” is subject to change. Final name depends on name availability and trademark restrictions

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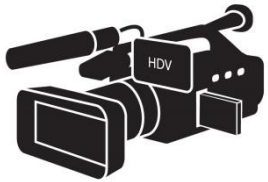
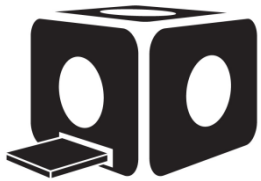
Markets

Photography



Videography

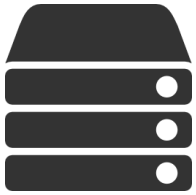


360 Capture

Drones

Compute

VR Goggles



Servers

Automotive

Industrial

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CFX 1.0 and 1.x compared to M.2

	M.2	CFX 1.0	CFX 1.x
Dimensions (mm)	22x30; 22x42; 22x60; 22x80	29.6x38.5x3.8	Various
Interface	PCIe, SATA	PCIe Gen3x2	PCIe Gen3x4; Gen3x8
Protocol	NVMe; AHCI	NVMe	NVMe
Performance	Up to 4GB/s	Up to 2GB/s	Up to 8GB/s
Durability (insert/extract)	Not defined	12,000	12,000
Enclosure	No	Yes	Yes
Availability of hosts (SoC/OS)	Now	Now	Now
Connectors availability	Now	Now	1H'2017
Card availability	Now	1H'2017	2H'2017

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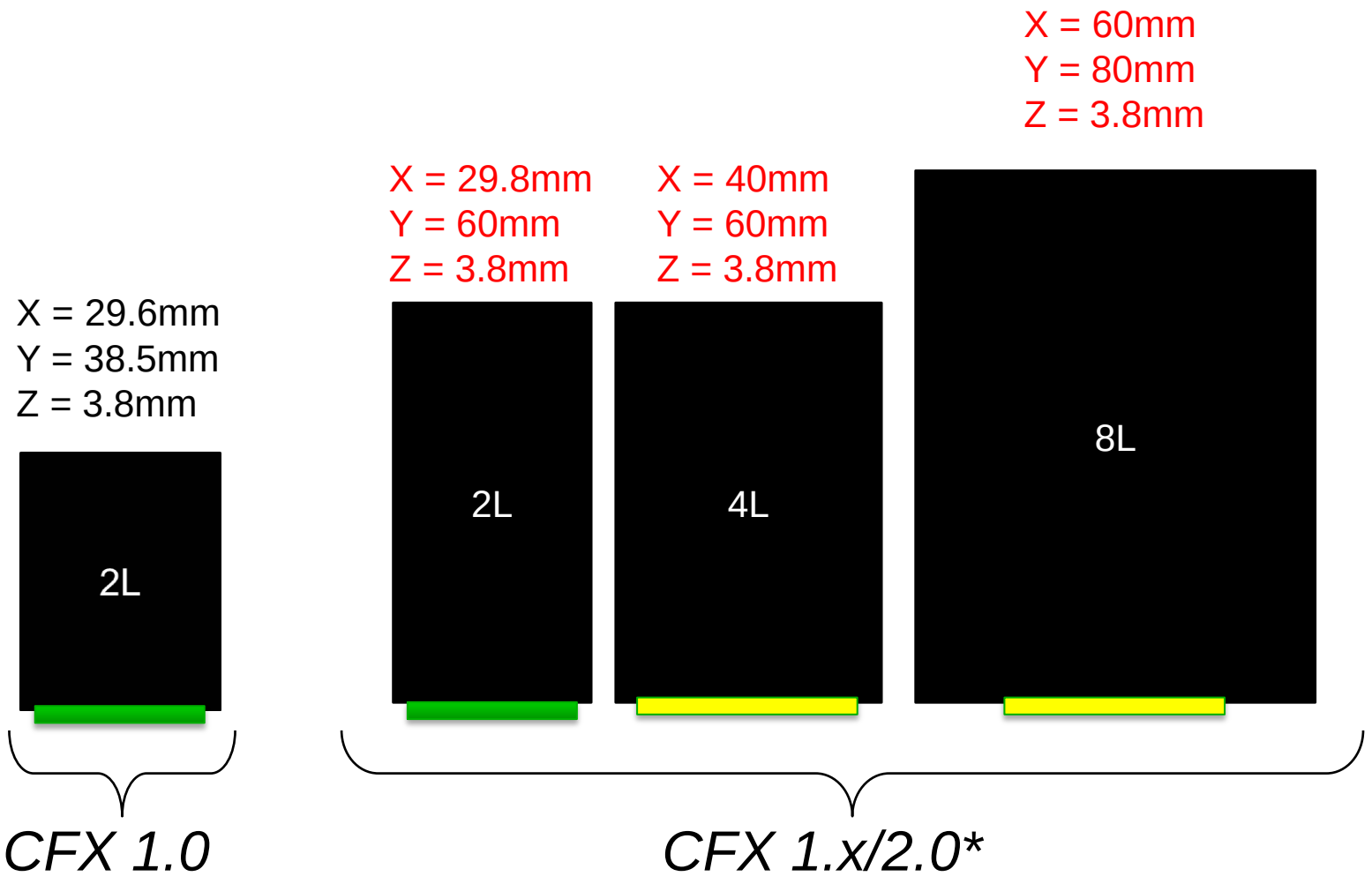
CFX Dimensions (dual side)



*(*Planning; same connector for 4L and 8L)*

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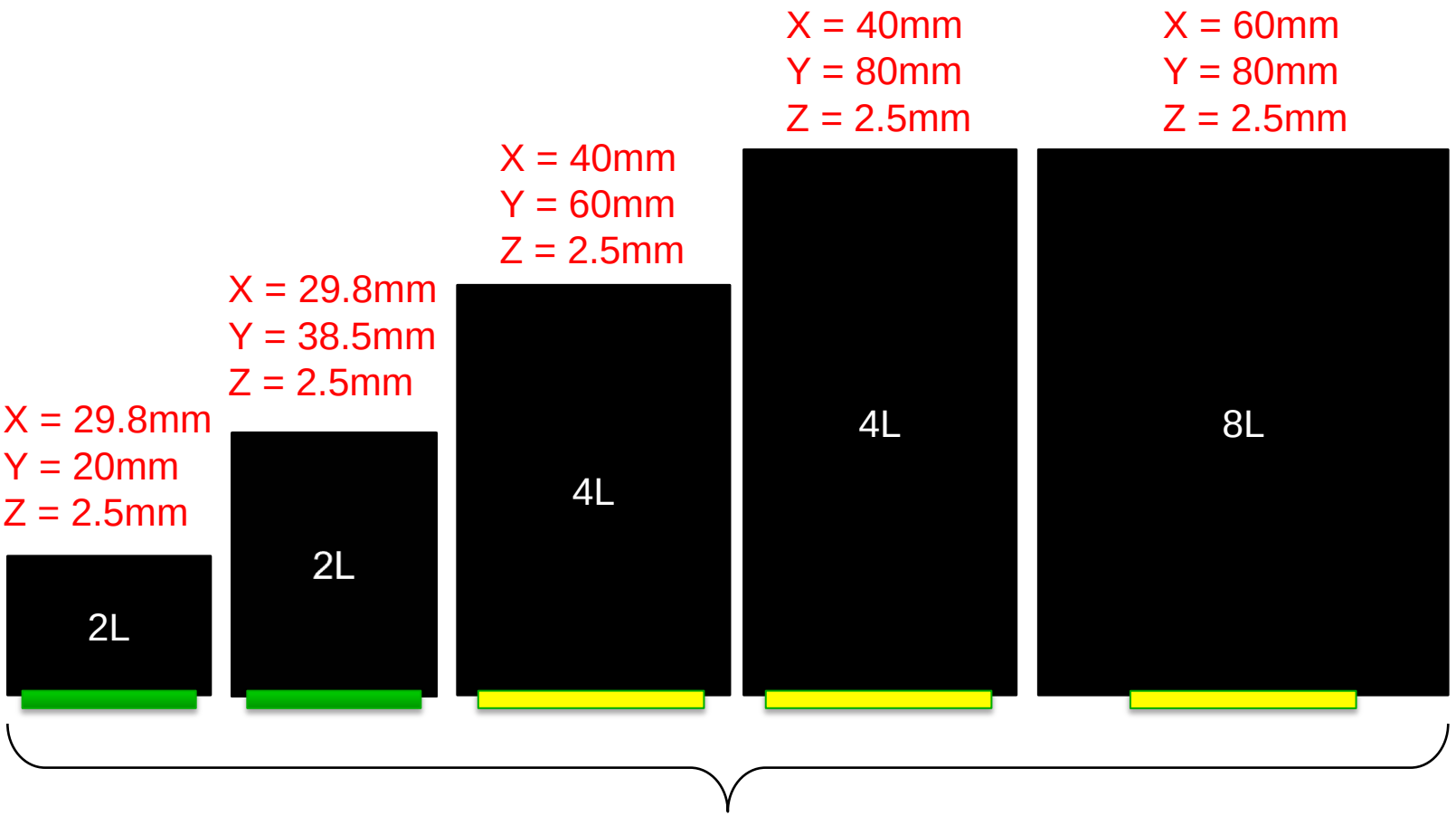
CFX Dimensions (single side)



*CFX 1.x/2.0**

*(*Planning; same connector for 4L and 8L)*

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Thank You!

CFA Welcomes You to Become a Participating Member.

There are two levels of membership:

- Executive ($5K/year) with voting rights
- Affiliate ($2.5K/year) with no voting rights

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