



# Creating a Better Video Wall Mount

What's in a mount? We take a look behind the engineering and design processes at *Chief*.

Intuitive thinking and engineering made the real video wall connection for Chief, shaping up as ConnexSys.

**C**hief's mission is to dramatically enhance customer experience with technology. The ConnexSys Video Wall Mounting System is just the latest example of that mission at work: and the name is as much about connecting with customers as it is connecting displays.

Several years back, installers were having trouble with large video wall installations.

The problem was, since no wall is perfectly straight, small imperfections are multiplied over space. If you have a 10x10 screen video wall and need to knock out the bottom of the screen an eighth of an inch to compensate for the wall, after ten times that's more than an inch of adjustment. Most mounts simply don't adjust enough for that, or they don't stay put once set by the installer.

Clearly, a new solution was needed, particularly as video wall demand continues to grow. Futuresource Consulting estimated 380,000 unit sales in the video wall market in 2012, a 60% year on year growth since 2003. That growth is expected to continue, with 1 million units estimated in 2015!

Chief uses an installer inspired process to create new solu-

tions, and working on a new solution for video wall mounting was no different. Customers helped guide product design with feedback at every step of development. The ConnexSys Video Wall Mounting System is the result of this thoroughly researched development process.

## Here's how they did it...

The first step was to collect information from installers.

"We spent an immense amount of time on customer empathy," says Chief Engineering Supervisor Greg Rupp. "It's not that we didn't do it in the past but that we did so much of it this time around, it felt like what we did in the past was almost nothing."

Research revealed the four most common problems with video wall installations: speed; alignment; serviceability and rigidity. Armed with feedback from dozens of installers, the engineering team was assembled. And they started with a clean sheet of paper.

## Drawing after drawing

Solving one challenge at a time, the Chief team worked through the solution.

Early on, the idea to use strut channel as an anchor entered the design and stuck. It provided a strong, flat base for quick levelling of a single row.

For several days in a secret room at InfoComm 2013, Chief engineers met with more than 20 firms to gather feedback on the rough prototype they brought with them.

"The nice thing about the June prototype is it was clearly a prototype," explains Product Manager Kathryn Gaskell. "When you have something at that level, people are more willing to honestly say what's good and what isn't."

The meetings at InfoComm helped guide the next design stages and decisions. It was clear a new release system and more stability were needed.

Justin Nicolay, a mechanical designer at Chief, was tasked with devising a new release system. Notably, his bike restoration hobby came in handy by leading him to a system that uses a bike brake mechanism for consistent, controlled display access.

At the end of the summer, it was time once again to return to customers for a fresh look at the solution. One of these was Vince DiStasio, Vice President of Video Visions based in Treviso, Pennsylvania.

"It should be a game changer in levelling your video wall," says DiStasio. "Any wall that you go to hang a video wall, the contractor says it's straight but there's always some flexion in the wall. The one beam will help a lot to run everything on the same level plane."

And Chief got the same reaction wherever the team took it. The last customers who saw the new system asked when they could order it.

After all was said and done, the engineers were happy with the results as well. Design thinking and empathy for installers helped to guide them to a solution that hit everything on their wish list.

The Chief video wall system provides installers with numerous benefits that answer their main problems with video wall mounts.

Among these are:

- **Strut channel installation:** Quickly aligns an entire row and removes the need for spacers to measure horizontally between mounts. Each mount comes with rail stops and four cable management clips that work with strut channel.



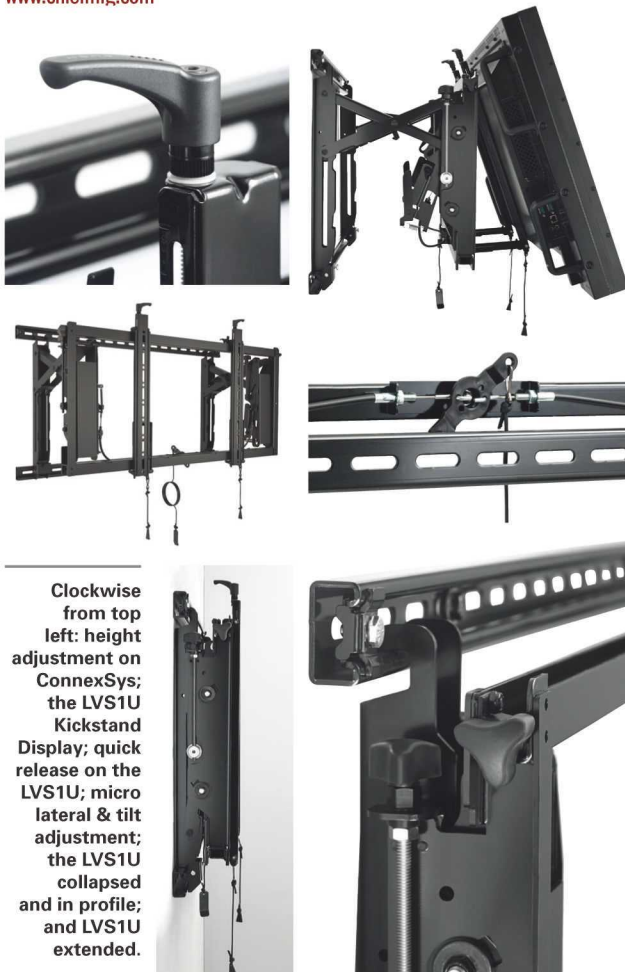
- **PowerZone adjustment:** Six points of tool-free height, tilt, lateral and depth adjustment are all found in one easy to access location. ConnexSys mounts allow the home position to be set anywhere between 102 and 186mm from the wall for perfect depth. This helps accommodate crooked walls and recess applications.

- **RapidDraw display release:** A controlled pull cord release gives installers access to any display on the video wall. The mounts can be pulled out up to 348mm from the wall for ample access space. Engage the kickstand to 20° for even more room to work.

- **Rigidity:** Chief engineers added rigidity to the solution to prevent accidental screen shift from occurring when the screen is pulled out.

ConnexSys is available in four versions: landscape LVS1U and portrait LVS1UP with rails. They can be ordered without strut channel, LVXSU and LVXSUP respectively, so installers can take advantage of longer lengths from local sources.

"We had a whole long list of features and benefits we wanted to get into this product," comments engineer Jay Dittmer. "It was really extensive. And I don't think we had to delete anything. We were able to make it all out of sheet metal and springs and whatever. We didn't have to compromise!" [www.chiefmfg.com](http://www.chiefmfg.com)



Clockwise from top left: height adjustment on ConnexSys; the LVS1U Kickstand Display; quick release on the LVS1U; micro lateral & tilt adjustment; the LVS1U collapsed and in profile; and LVS1U extended.

## ConnexSys in Action

A cellular store in a Canadian mall wanted to catch the eyes of passing shoppers. To do this, the architect called for a 5x5 video wall to fit into a corner with the last column on the adjacent surface. On top of that, the installer only had three or four days to get the job done.

"The challenge was the super narrow bezel, a 90° bend and to maintain serviceability," says Gil Gauthier, Certified Technology Design Specialist at Winnipeg, Canada based Advance Pro, an electronic systems integrator for audio, video, communications, security and multimedia. "I know the installer kind of went white when he heard the 90° part. It's already a challenge to line up. If it wasn't for those brackets, I don't know how he would have done it."

Gauthier stated that the biggest advantage of the ConnexSys system is in the ability to hang the mount from standard strut channel. "It's like the Lego block of the installer world," he explains.

The installer only had three days on site to put in the wall on top of working around the electrician, flooring and lighting installers. They were using ultra-narrow, bezel-less NEC displays with a total gap of 5mm between screens. The last column's perpendicular placement would be a huge challenge.

To meet that challenge, installer Joe Premecz said the ability to slide the displays horizontally and adjust the depth made it easy to line up the corner edges. The team spent half a day making sure the strut channel was installed and square, then the 25 panels were put up in around three hours. "They were a huge time saver," enthuses Premecz.

The micro adjustment allowed by the ConnexSys system to line up the screens safely before locking them in place, the quick levelling using strut channel to hang the main row of four screens and the need for ultra-precise alignment for the high definition content, all made the job possible.

"Chief listened to installers," stresses Gauthier. "This is a prime example of making life easier for the installation guys. They actually said this makes life better and easier. It makes clients happier. The overall project was easier and smoother. It's win win win. And by looking after the installers, we are looking after everybody!"

ConnexSys well and truly in place, below.

